JVC

SERVICE MANUAL

MODEL
QL-Y55F

QUARTZ-LOCKED
FULLY-AUTOMATIC
TURNTABLE

No. 2633
JUN. 1982

Contents

1. Specifications

MOTOR SECTION

Motor	: Coreless, DC type, Quartz-locked FG servomotor
Drive system	: Direct drive
Speeds	: 33-1/3, 45 rpm
Wow and flutter	: 0.015 % (WRMS) 0.009 % (RMS, rotating section by FG method)
Signal-to-noise ratio	: More than 78 dB (DIN-B)
Speed detection	: Frequency generator
Starting torque	: 1.5 kg·cm
Speed deviation	: Within 0.002 %
Load characteristics	: 0 % (with 210 g total tracking force)
Platter	: 30.8 cm

TONEARM SECTION

Type	: Dynamically-balanced electronic servo-controlled tonearm
Effective length	: 254 mm
Overhang	: 15 mm
Height range	: 48 – 54 mm (preset to 51 mm)
Adaptable cartridge weight range	: 3.5 – 16.5 g (straight arm) *7.5 – 20 g (S-shaped arm) *16 – 32 g (S-shaped arm, using main weight "SW-Y55") *Including headshell weight

CARTRIDGE SECTION

(Except for U.S.A., Canada and U.K.)

Model	: MC-200E
Type	: Moving coil (MC)
Frequency response	: 10 Hz – 25,000 Hz
Output	: 2.3 mV (1,000 Hz)
Channel separation	: 25 dB (1,000 Hz) (Test record TRS-1)
Load resistance	: 47 kohms
Compliance	: 8×10^{-6} cm/dyne (Dynamic) 24×10^{-6} cm/dyne (Static)
Stylus tip	: 0.3 x 0.7 mil diamond
Stylus	: DT-200E
Optimum tracking force	: 1.75 g ±0.25 g

GENERAL

Power source	: See page 32.
Power consumption	: See page 32.
Dimensions	: 19.5(H) x 49.5(W) x 40.5(D) cm (Since the dimensions show only the design measurements, consideration is required when installing the unit in a limited space such as a rack, etc.)
Weight	: 12 kg (26.5 lbs) (withoug packing carton)

Accessories

- EP adaptor 1
- S-shaped arm pipe 1
- Sub-weight 1
- Hexagonal screwdriver 1

Design and specifications subject to change without notice.

2. Service Precautions

- Concerning the removed wire or clamp of a board, be sure to set it as arranged previously when remounting it. For handling the solderless connector, see page 21.
- When replacing the parts marked with ⚠ , be sure to use the designated parts to ensure safety.
- When servicing the motor for proper rotation or the tonearm for proper movement, be sure to place the turntable level.
- When powering the unit with the motor connector disconnected, the drive transistors are unavoidably destructed. To avoid this, never disconnect the connector when powering.
- When repairing a P.C. board, note that when powering the unit with the heatsink removed, the transistor temperature rises due to insufficient heat radiation.
- For repairing the tonearm section, refer to the exploded view of tonearm ass'y on page 24 and pay adequate attention to handling the coil section.
- Be careful never to attach iron dusts or similar others to the motor and tonearm which use magnets.
- When removing wood screws on the cabinet, wood dusts occur. Intrusion of wood dusts into the bearing section of motor or tonearm or into a clearance between magnets may cause the performance to be degraded. To avoid this, clear off the dusts with adhesive tape or the like.
  When reassembling the cabinet, note that forcibly tightening a wood screw causes damage to the thread so that the screw does not work.
- When replacing parts of tonearm, motor, etc. and completing the repair, be sure to perform the lead-in and lead-out adjustment.
- Placing the tuner antenna and the turntable signal cord near each other gives interference to the tuner, thereby causing noise. For favorable listening, place them away from each other as much as possible.

3. How to Clean and Repair the Cabinet

- **Cleaning**
  To clean the cabinet, soak a piece of dry, soft cloth with silicone wax available on market, wipe the cabinet thoroughly, and finish with dry, soft cloth evenly.
- **Repairing**
  Slight scratches
  Apply fine rubbing compound to cloth and polish the surface with slight force until the scratches disappear. Finally, apply silicone wax to dry, soft cloth and wipe the surface with it totally.
  Serious scratches
  Coat the scratched part with lacquer enamel two or three times in such a manner that the color is first lighter than that at the surroundings and then color becomes deeper and identical to that at the surroundings. Apply thick transparent lacquer thickly to the part with the tip of a thin brush. When it has dried up (it takes about 8 hours), grind with water-resistance sand-paper of #800-1000 using water. When the surface has become level, spray it two or three times with the transparent lacquer for polyvinyl chloride which is diluted appropriately. When it has dried up, polish it with fine rubbing compound. Finally, apply silicone wax to dry, soft cloth and wipe the surface with it totally.
  Deep concave
  Put lacquer putty or annealed lac in the concaved part, then write grains with lacquer enamel of the same collor as the surrounding grains in such a manner that the color is first lighter and then deeper and identical to that at the surroundings. Spray it two or three times with the transparent lacquer for polyvinyl chloride which is diluted appropriately. When it has dried up, polish it with fine rubbing compound. Finally, apply silicone wax to dry, soft cloth and wipe the surface with it totally.

Note: If the rubbing compound and silicone wax are not available, consult your nearest JVC dealer.

4. Names of Parts and Their Functions

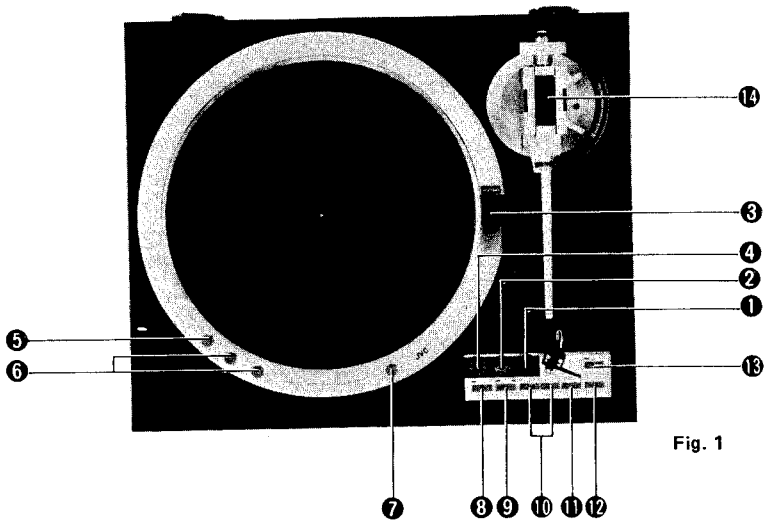


Fig. 1

❶ **Q DAMPING control**
Set this control to the specified tracking force of the cartridge to smoothen horizontal and vertical stylus tracing of the record grooves and lower the resonance peak levels of the tonearm.

❷ **ANTI-SKATING control**
Set this control to the specified tracking force of the cartridge using the ● marked index for a conical stylus, ⬬ marked index for an elliptical or a Shibata stylus. This cancels the centripetal force (sliding force of the tonearm to the center of the record) and prevents the stylus tip from exerting unwanted force to the inner side of the record groove.

❸ **Speed indicator**
When the platter reaches the proper speed, the "33" or "45" indication will change from red to green.

❹ **TRACKING FORCE control**
Turn this control to add tracking force according to the specified tracking force of the cartridge.

❺ **READY switch**
Press this switch to turn the power on. The speed indicator "33" and the SIZE indicator "30" will light to show that the power is on and the tracking force set with the TRACKING FORCE control is applied to the tonearm. Press it again to turn the power off.
Note:
Even when the READY switch is pressed to OFF, about 2.6 watts is consumed. Accordingly, unplug the power cord from the wall outlet when not in use.

❻ **45, 33 switches**
Select the platter rpm with these switches.
Press the "45" switch for a 45 rpm record and press the "33" switch for a 33-1/3 rpm record. The speed indicator corresponding to the record rpm will light.

❼ **TT-START/STOP switch**
Press this switch to start or stop the rotation of the platter only for manual operation.

❽ **REPEAT button**
Press this button to repeat play of a record.
The REPEAT indicator will light. To release the repeat play, press this switch again and the REPEAT indicator will go out.
Note:
If the START/STOP button is pressed while playing a record, the repeat play is automatically released and the tonearm is returned to the rest.

❾ **SIZE button**
Use this button to select the record size for automatic play. The tonearm is lowered on the outer groove of a 17-cm record when "17" on the SIZE indicator is lit and of a 30-cm record when "30" is lit.
Note:
It is possible to change the tonearm descent position when the tonearm is moving but it is impossible to change it when the tonearm starts to descend.

❿ **<, > buttons**
It is possible to move the tonearm to a desired position by hand or by using the following buttons.
< : Press this button to move the tonearm to the left and release this button to stop it.
> : Press this button to move the tonearm to the right and release this button to stop it.

⓫ **UP/DOWN button**
If this button is pressed when the tonearm is raised, the tonearm will be lowered; if this button is pressed when the tonearm is lowered, the tonearm will be raised. This is useful for manual play.

⓬ **START/STOP button**
Press this button to start automatic play or to stop playing in the middle of a record. This button acts as a start button for starting play of a record and when this button is pressed while a record is being played, it acts as a stop button.

⓭ **ZERO BALANCE button**
Press this button only for zero balance adjustment. The ZERO BALANCE indicator will light and all buttons except the READY switch become non-functional.
Make sure that this button is pressed again and the ZERO BALANCE indicator goes out after ZERO BALANCE adjustment.

⓮ **Tonearm**
All functions, the TRACKING FORCE, ANTI-SKATING, Q DAMPING, etc. are done electrically to reduce the mechanical loss.

5. Technical Explanation

- Turntable controlling microcomputer (VC4054)

1. Pin arrangement

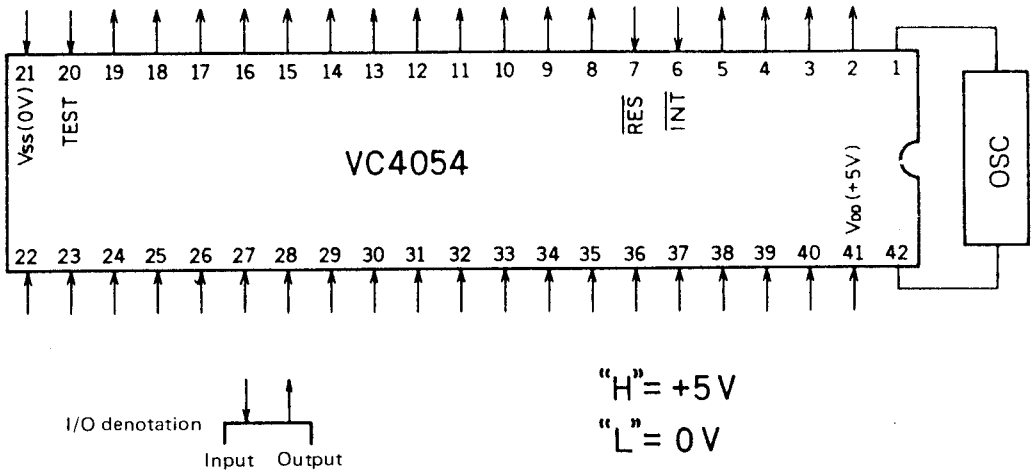


Fig. 2

2. Pin function

Pins 1 and 42: The oscillator which generates the clock pulse for the microcomputer is connected.

Pin 2: "L" to rotate the turntable motor.

Pin 3: Output pin, "H" to provide slow tonearm motion for the first 0.16 sec when the tonearm begins to move horizontally.

Pin 4: "L" when operating an arm operation button or when the arm stops at the UP position. (Because of discharging C813.)

Pin 5: Stand-by pin

Pin 6: Interrupt input pin

Pin 7: Microcomputer reset pin

Pins 8, 9, 10 and 11: Output A, B, C and D pins (described on page 14)
pin 8 = output A, pin 9 = output B, pin 10 = output C, pin 11 = output D

Pin 12: "33 rpm" red LED drive pin
The LED lights when this pin is at "L".

Pin 13: "33 rpm" green LED drive pin
The LED lights when this pin is at "L".

Pin 14: "45 rpm" red LED drive pin
The LED lights when this pin is at "L".

Pin 15: "45 rpm" green LED drive pin
The LED lights when this pin is at "L".

Pin 16: "30 cm" LED drive pin
The LED lights when this pin is at "L".

Pin 17: "17 cm" LED drive pin
The LED lights when this pin is at "L".

Pin 18: "Repeat" LED drive pin
The LED lights when this pin is at "L".

Pin 19: "Zero balance" LED drive pin
The LED lights when this pin is at "L".

Pin 21: Connected to 0 V power supply.

Pins 22 and 23: Stand-by pins

Pin 24: An "L" signal is entered to this pin via the interface circuit from the motor when the motor is quartz-locked.

Pin 25: When the tonearm moves at the lead-out speed, an "H" signal is entered to this pin from the detection circuit.

Pin 26: When the tonearm lowers down on the record, an "H" signal is entered to this pin.

Pin 27: When the tonearm lifts up to the UP position, an "L" signal is entered to this pin.

Pin 28: The pin which accepts the signal from the "45 rpm" switch.

Pin 29: The pin which accepts the signal from the "33 rpm" switch.

Pins 30, 31 and 32: The signal from the tonearm encoder is entered to these pins to inform the microcomputer of the horizontal tonearm position (e.g. rest, 30 cm, 17 cm, etc.).

Pin 33: The pin which accepts the signal from the TT-START/STOP switch.

Pin 34: The pin which accepts the signal from the REPEAT switch. "H" when the switch is pressed.

Pin 35: The pin which accepts the signal from the SIZE switch. "H" when the switch is pressed.

Pin 36: The pin which accepts the signal from the UP/DOWN switch. "H" when the switch is pressed.

Pin 37: The pin which accepts the signal from the "<" (left motion) switch. "H" when the switch is pressed.

Pin 38: The pin which accepts the signal from the ">" (right motion) switch. "H" when the switch is pressed.

Pin 39: The pin which accepts the signal from the tonearm START/STOP switch. "H" when the switch is pressed.

Pin 40: The pin which accepts the signal from the ZERO BALANCE switch. "H" when the switch is pressed.

Pin 41: Connected to +5 V power supply.

6. Block Diagram

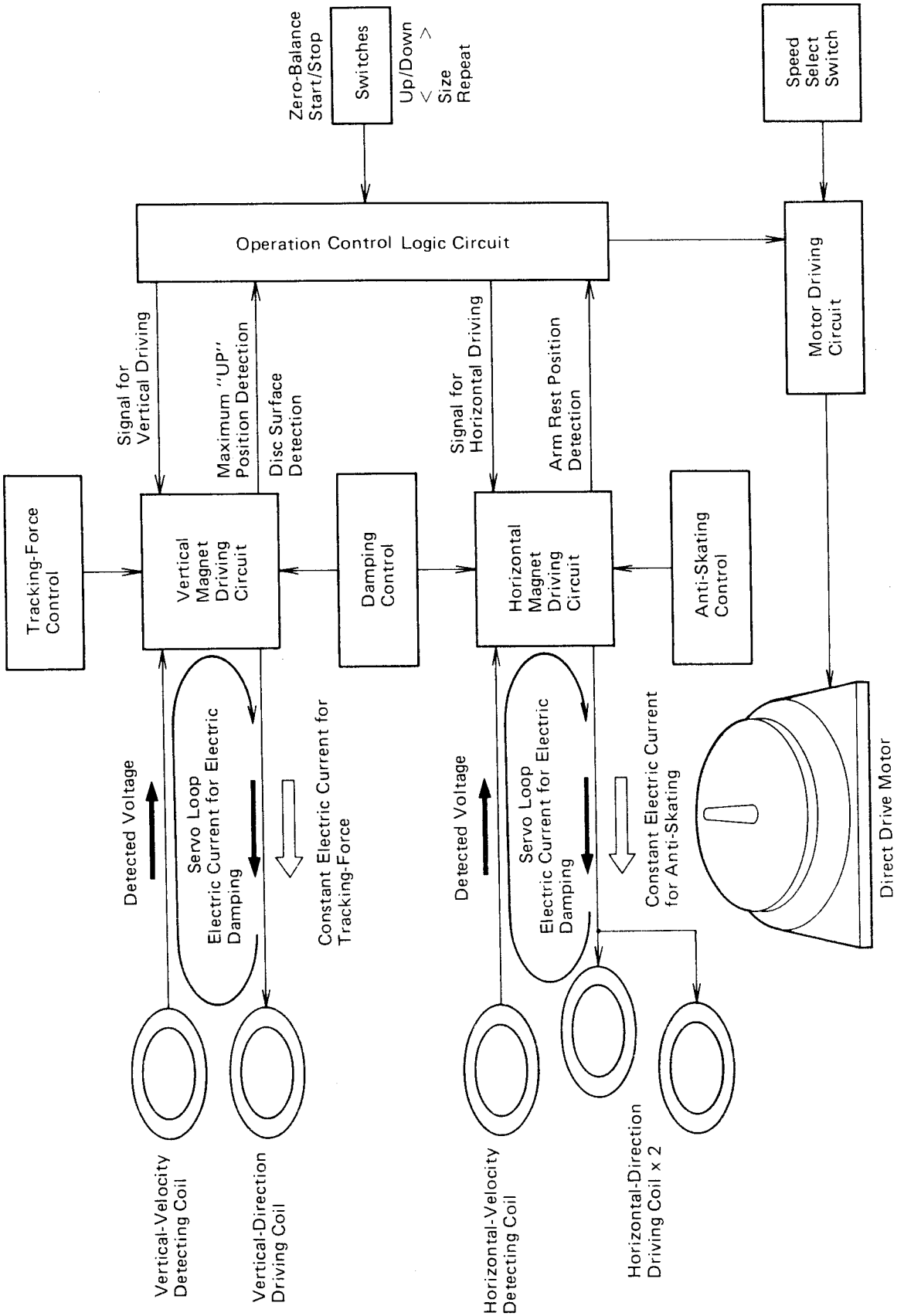


Fig. 3

7. Adjustment Procedures

7-(1) Overhang adjustment

Position the cartridge so that the distance between the headshell end face and the stylus tip is 47 ±1 mm as shown. Confirm that the longitudinal axis of the cartridge is aligned with that of the headshell.

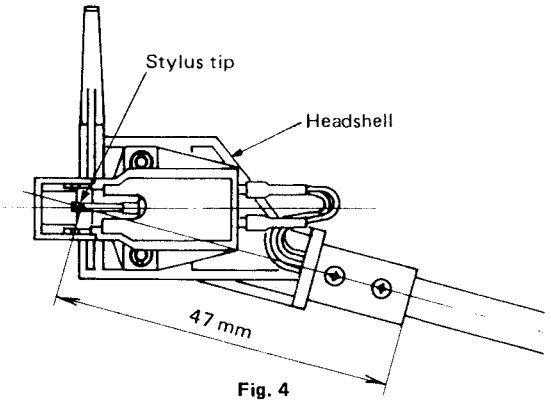


Fig. 4

7-(2) Tonearm height adjustment

1. With the arm clamped to the rest, loosen the tonearm height adjustment screws with an accessory hex wrench as shown. Then, adjust the arm height by moving the arm up and down so that the stylus tip is about 25 mm up from the control panel.
   After adjustment, securely tighten the adjustment screws.
2. Release the arm from clamping and slightly lift it up until it stops, then confirm that the stulys tip is about 7 - 9 mm above the platter mat.

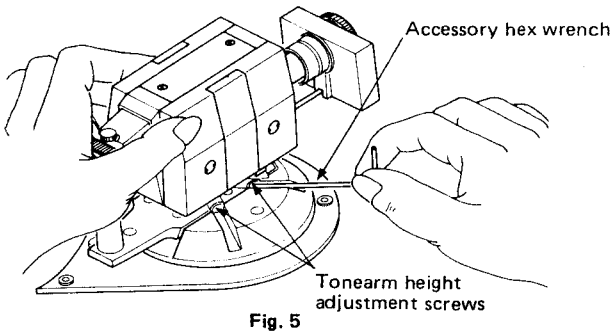


Fig. 5

7-(3) Lead-in adjustment

Be sure to perform this adjustment prior to the lead-out adjustment.
Set the SIZE button to "17", then adjust by the lead-in adjustment screw so that the lead-in count on the test record (RG-325) is 16±3.

Note: When the lead-in count is more than the above value, turn the adjustment screw counterclockwise, while when it is less, turn the screw clockwise.
Since the adjustment screw is not provided with the stopper, be careful not to turn it excessively, because this causes the directionality of the screw to be reversed.

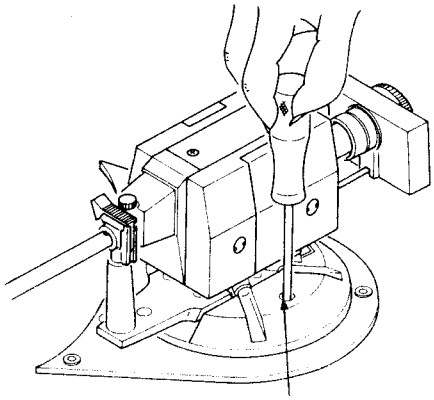


Fig. 6 The lead-in adjustment screw is located in this hole.

7-(4) Stylus height adjustment

Perform this adjustment after completion of tonearm height adjustment.

1. Turn the READY switch ON, then lift up the arm by the UP/DOWN button.
2. Turning the adjustment screw clockwise causes the stylus to rise, while turning counterclockwise causes it to lower. The height from the stylus tip to the record surface is appropriate at about 6 mm.

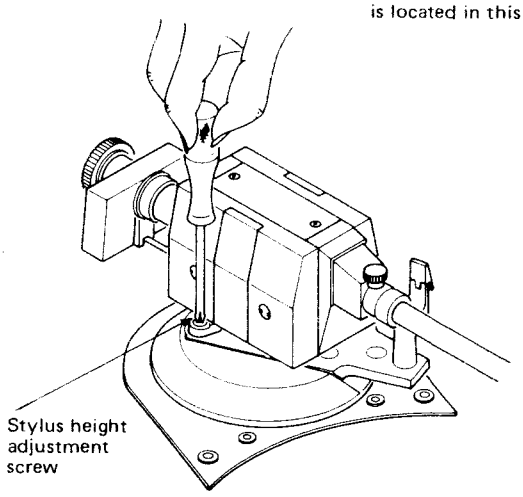


Fig. 7

7-(5) Tracking force adjustment I

1. Turn the power ON and press the ZERO BALANCE button. At this time, the ZERO BALANCE indicator lights.
2. The square weight has three click stop positions. Select a position suitable to the cartridge weight.
3. Turn the knurled knob of the main weight without moving the square weight and stop it at the position that the stylus tip almost touches the record surface.
4. Press the ZERO BALANCE button again, and the ZERO BALANCE indicator goes out and the arm returns to the rest automatically. After this, clamp the arm to the rest.
   Note: Even when the power is turned OFF mistakenly or power failure occurs, the record and stylus are protected against any damage since a bias of about 0.5 g is applied beforehand.
   Therefore, since the zero balance at power OFF differs from that at the ZERO BALANCE button ON, the arm is intended to lift up at power OFF.
5. Adjust the TRACKING FORCE, ANTI-SKATING and Q DAMPING scales to the tracking force of the cartridge to be used.
   Note: When using a conical stylus, adjust the ● marked index to the tracking force of the cartridge to be used. When using an elliptical or a Shibata stylus, adjust the ⬬ marked index to it.

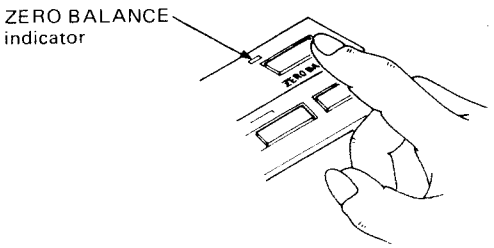


Fig. 8

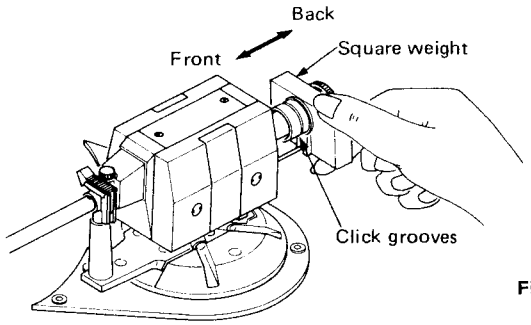


Fig. 9

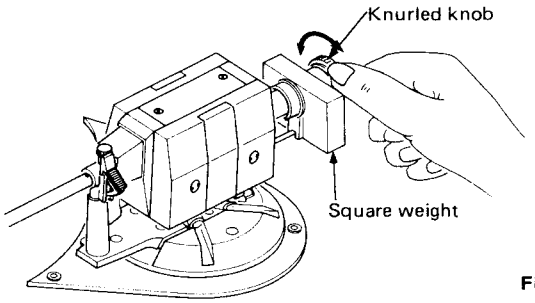


Fig. 10

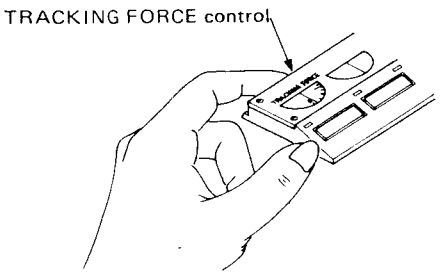


Fig. 11

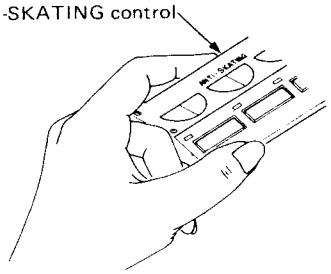


Fig. 12

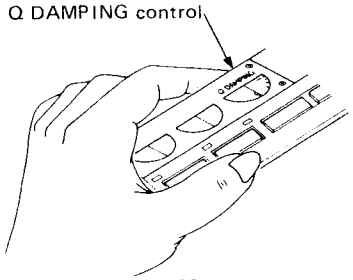


Fig. 13

7-(6) Motor phase adjustment

The quartz-locked phase adjustment is usually unnecessary, because the phase locking range is wide.
However, when replacing IC813 (VC4046), perform this adjustment as indicated below.

1. Prepare an impedance conversion circuit as shown right.
2. Adjust VR806 at 33-1/3 rpm so that a waveform as shown below is obtained.

Fig. 14

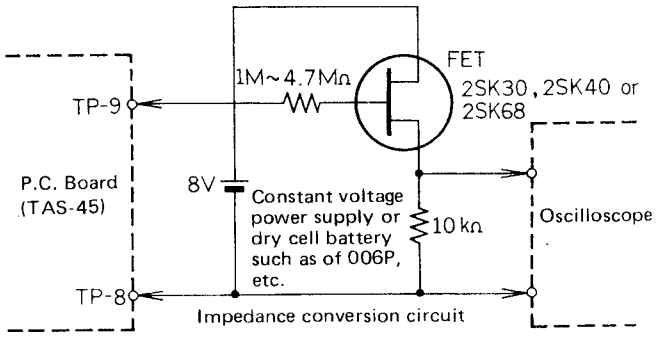


Fig. 15

7-(7) Lead-out adjustment

Adjust VR805 so that the arm returns at 3 mm pitches of a test record (8602-44) and does not return at 0.5 mm pitches of a test record (8602-45).
When the arm does not return at 3 mm pitches of the test record (8602-44), adjust the voltage between test points TP-1 and TP-7 to nearer to 0 V by 20 % than its set voltage.
When the arm returns at 0.5 mm pitches of the test record (8602-45), adjust the same voltage to more than 0 V by 20 % of the set voltage in absolute value.

7-(8) Horizontal drive stage offset adjustment

1. With the arm clamped to the rest, enter the unit into the PLAY mode by pressing the START/STOP button (tracking force 0, Q damping 0, anti-skating 0)
2. Adjust VR807 so that the voltage between TP-2 and TP-3 is minimum (within ±5 mV).

7-(9) Horizontal first stage offset adjustment

1. With the arm clamped to the rest, enter the unit into the arm UP mode by pressing the UP/DOWN button. (tracking force 0, Q damping 0, anti-skating 0)
2. Adjust VR804 so that the voltage between TP-2 and TP-3 is minimum (within ±5 mV).

7-(10) Vertical offset adjustment

1. With the arm clamped to the rest, enter the unit into the PLAY mode by pressing the START/STOP button. (tracking force 0, Q damping maximum)
2. Adjust VR803 so that the voltage between TP-4 and TP-5 is minimum (within ±5 mV).

7-(11) Anti-skating adjustment

1. Set the ANTI-SKATING scale to (elliptical stylus) 3. (tracking force 0, Q damping 0, arm DOWN mode)
2. Adjust VR801 so that the voltage between TP-2 and TP-3 is 1.46 ±0.1 V.

7-(12) Tracking force adjustment II

1. Set the TRACKING FORCE scale to 1.5 g. (Q damping 0, anti-skating 0, PLAY mode)
2. With the stylus set on the tracking force gauge, adjust VR802 so that the tracking force gauge reads 1.5 ±0.1 g.

Playmode = press start/stop
Let arm move, then clamp it
to the rest

7-(13) Adjustment locations

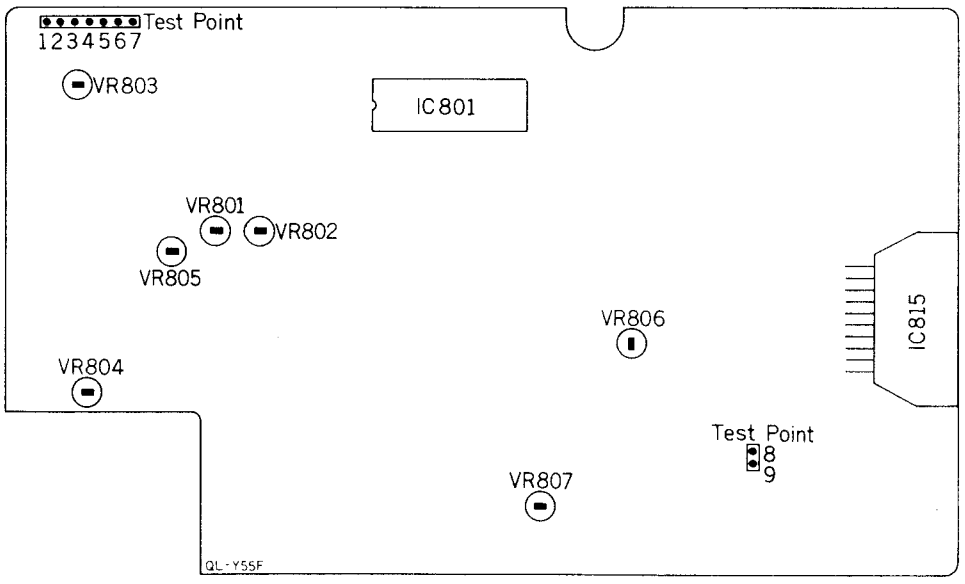


Fig. 16

8. Removal Procedures

8-(1) Removal of vertical coil
(Figs. 17 and 18)

1. Remove the four screws mounting the coil cover. (Use a screwdriver for pin faced screws.)
2. Paying attention not to cut any coil lead, remove the coil soldering on the board.
3. Pull out the main weight.
4. Remove the four screws securing the coil clamp. (The nuts are also removed.)
5. Set up the coil clamp, and pull out the coil, paying attention not to damage it.

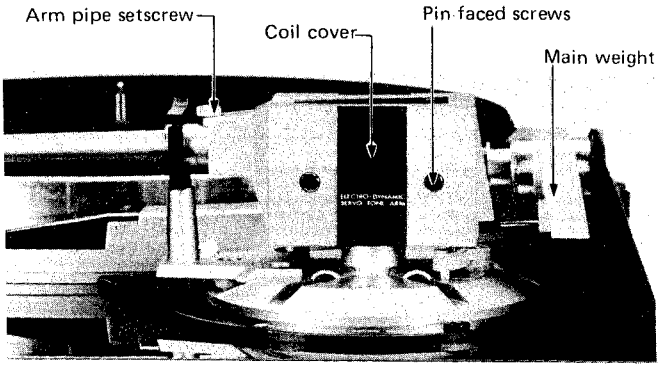


Fig. 17

8-(2) Removal of tonearm section
(Figs. 19 and 20)

1. Remove feet. (For this removal, it is sufficient to remove two among the four feet. However, removal of the two feet at the arm side facilitates the removal of the control panel section.)
2. Remove the nine wood screws mounting the bottom board.
3. Remove the soldering of the five leads connected to the lug terminal.
4. Remove the ground wire by removing the one screw securing the motor and the lug strip together.
5. Remove the connectors (10-P and 6-P) connected to the horizontal drive coil board and the lamp house.
6. Remove the five special screws mounting the arm base. (With hex wrenches of opposite side distance 3 mm and 4 mm)

Notes:

- When turning over the unit, take out the platter in advance.
- When mounting the arm base, set the 3 mm hex screws at first.
- When the arm pipe has been removed by loosening its setscrew to protect the cartridge, etc. against damage, the removing work is easily made.

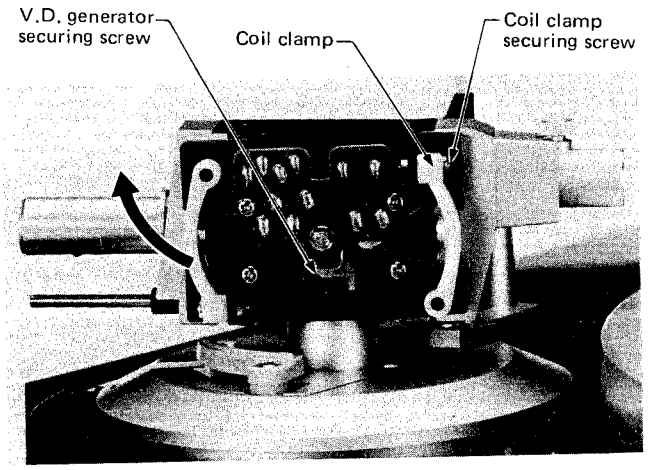


Fig. 18

8-(3) Removal of V.D. generator
(Figs. 18 and 20)

1. Remove the bottom board.
2. Remove the soldering of the five leads connected to the lug terminal and that of the six leads connected to the horizontal coil board.
3. Remove the coil cover.
4. Remove the two screws securing the V.D. generator. (With a hex wrench of opposite side distance 1.5 mm)

Notes:

- When mounting the V.D. generator, position the generator by turning the yoke so that the lead-in adjustment screw is located at the center of the adjustment hole.
- When inserting the generator in the bearing shaft, the insertion should be carried out with a slight pull of the wire to protect the wire from being caught in any part or being cut.

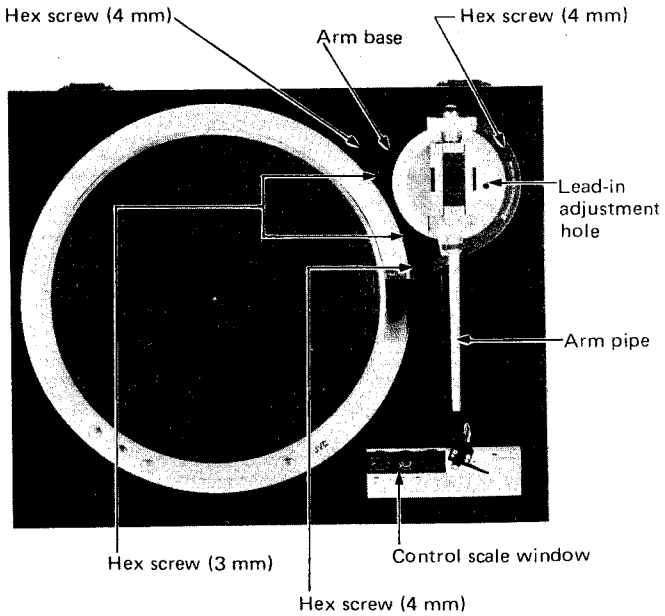


Fig. 19

8-(4) Removal of horizontal coil P.C. board (Fig. 20)

1. Remove the bottom board.
2. Remove the soldering of the six leads connected to the coil board.
3. Remove the three screws mounting the coil board. (These screws mount the two wire holders and the lug strip for ground wire at the same time.)
4. Pull out the coil board horizontally, being careful not to damage the coil.

8-(5) Removal of lamp house ass'y (Fig. 21)

1. Remove the tonearm section. (Refer to **"Removal of tonearm section".**)
2. Remove the screw mounting the lamp house ass'y.
3. Hold the positioning boss slightly up as removing it, and turn it with a rotating center of the shaft clockwise.
4. Turn the yoke in the direction of an arrow concurrently, and take out the lamp house ass'y.

Note:

- When this removal is difficult in the above manner, it is easy by removing the horizontal coil board in advance.

8-(6) Removal of control panel section (Figs. 19 and 22)

1. Remove the bottom board.
2. Remove the two wood screws mounting the insulator.
3. Remove the four washer faced screws mounting the control panel section.
4. Since the plate (spring) which is mounted by two screws together with the control scale bracket may cut into the cabinet, loosen these two screws if so.

8-(7) Removal of LEDs on control panel section (Figs. 19 and 22)

1. Remove the four screws mounting the control scale windows. (With a small driver)
2. Pull out the three control knobs.
3. Remove the control panel section. (Refer to **"Removal of control panel section".**)
4. Remove the two screws mounting the control scale bracket. In this case, be careful not to lose the plate (spring) as it is detached together.
5. Remove the three screws mounting the LED board.

Note:

- As LEDs are provided with springs and control knobs are likely to come off, be careful not to lose any of these parts.

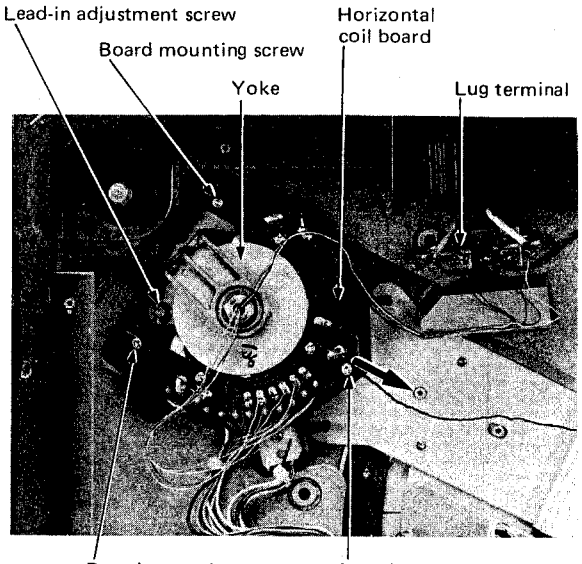


Fig. 20

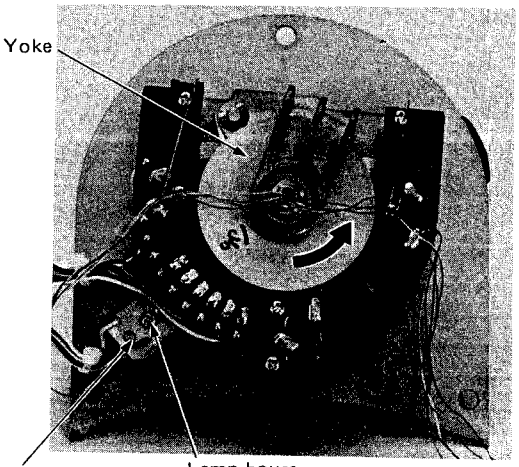


Fig. 21

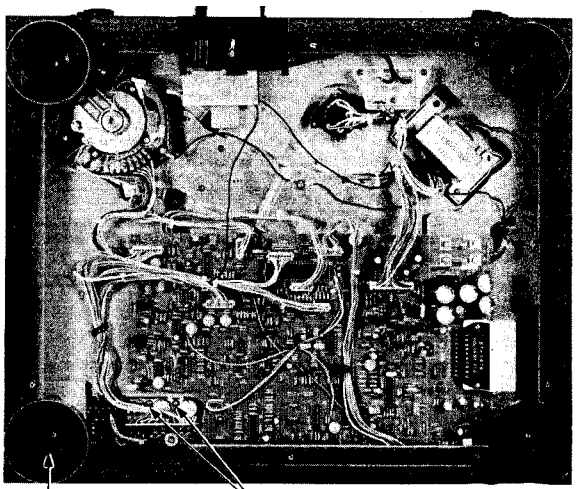
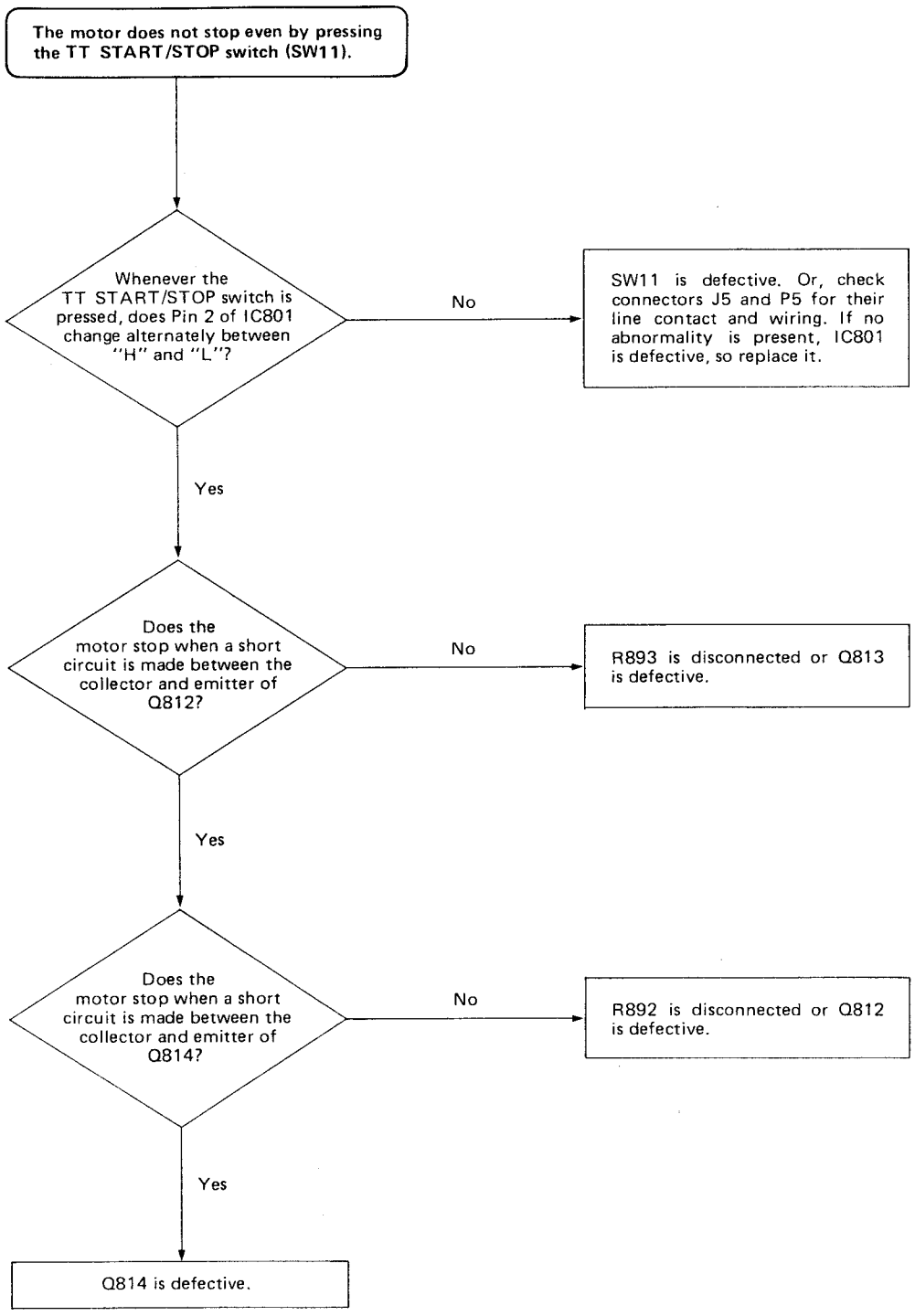


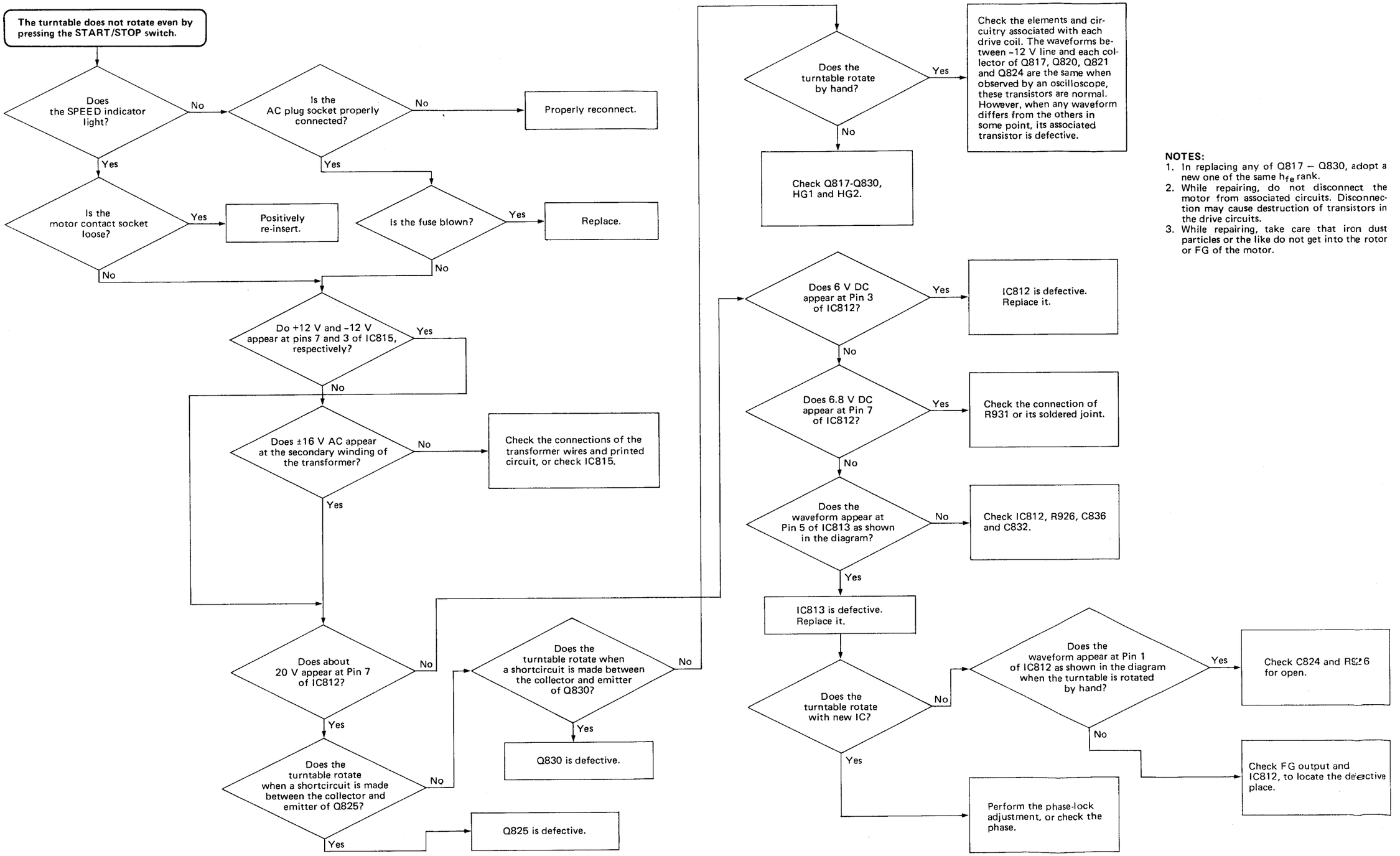
Fig. 22

9. Troubleshooting Charts

9-(1) Motor does not stop rotating



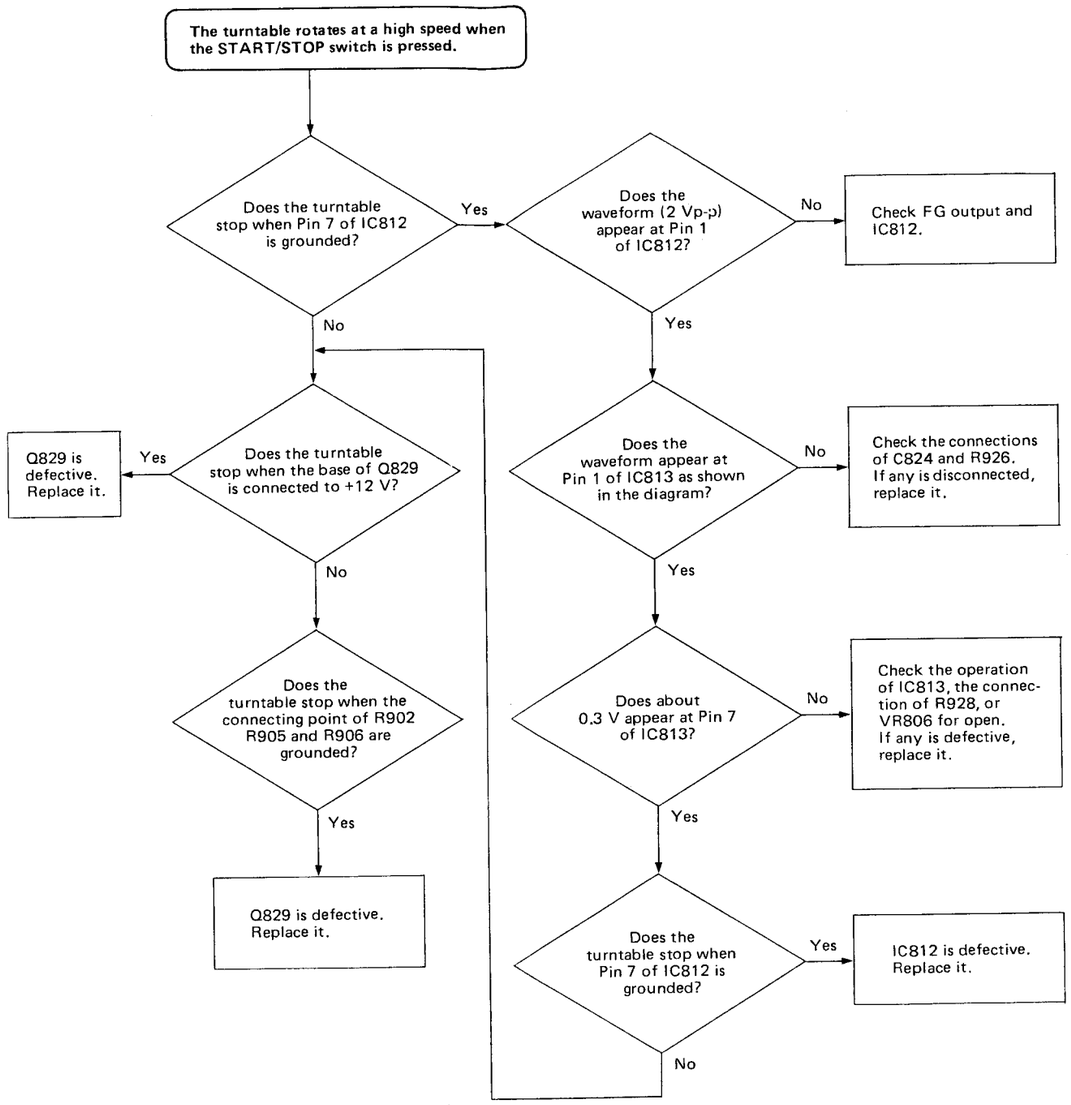
9-(2) Turntable does not rotate



NOTES:

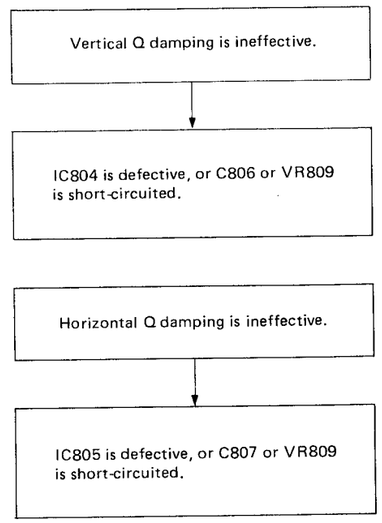
1. In replacing any of Q817 – Q830, adopt a new one of the same h_{fe} rank.
2. While repairing, do not disconnect the motor from associated circuits. Disconnection may cause destruction of transistors in the drive circuits.
3. While repairing, take care that iron dust particles or the like do not get into the rotor or FG of the motor.

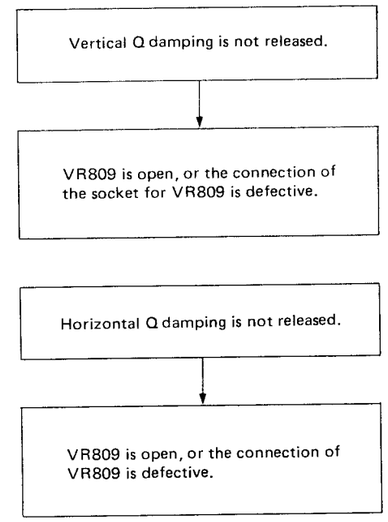
9-(3) Turntable rotates at high speed



NOTE: While repairing, never disconnect the motor from associated circuits. Disconnection causes destruction of transistors in the drive circuits.

9-(4) Q damping is ineffective





Outputs A, B, C and D for tonearm control

Each arm movement is performed by a combination of these outputs which are emitted from pins 8–11 according to their pin states. Therefore, when examining the arm movement, check to see if each input is applied to its associated pin as required and then if the output of each pin is emitted as shown below.

Table for vertical movement control

AB	PLAY	DOWN	UP	Zero Balance
LL	○			
HL		○		
LH			○	
HH				○

(Table 1)

Table for horizontal movement control

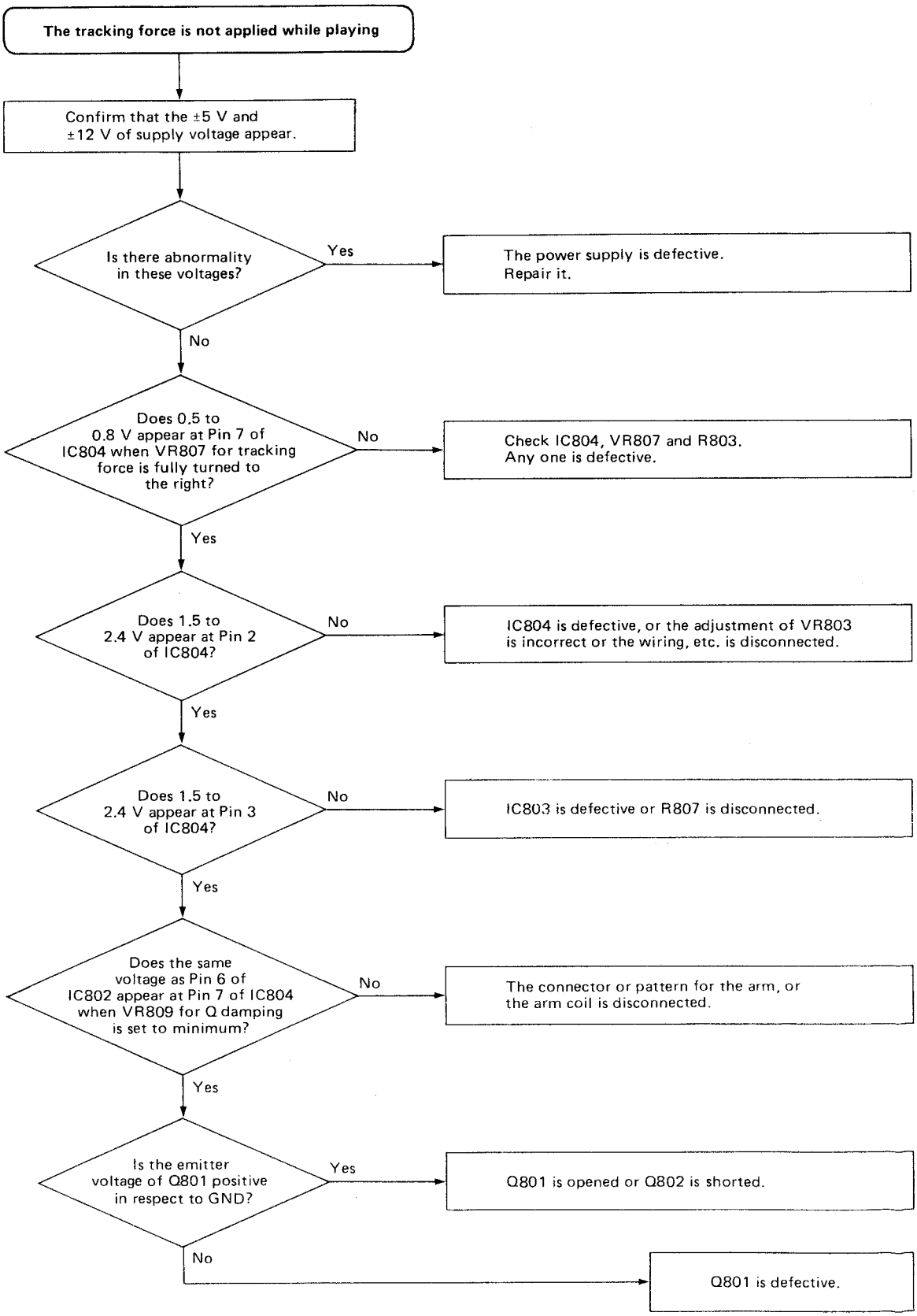
CD	PLAY	LEFT	RIGHT	STOP
LL	○			
HL		○		
LH			○	
HH				○

(Table 2)

Note:

1. PLAY refers to the arm which is on the record on play or is at the rest position.
2. DOWN refers to the arm which is lowering down.
3. UP refers to the arm which is to lift up or is lifting up.
4. LEFT and RIGHT refer to the arm which is moving left or right.
5. STOP refers to the arm which stops at the UP position.

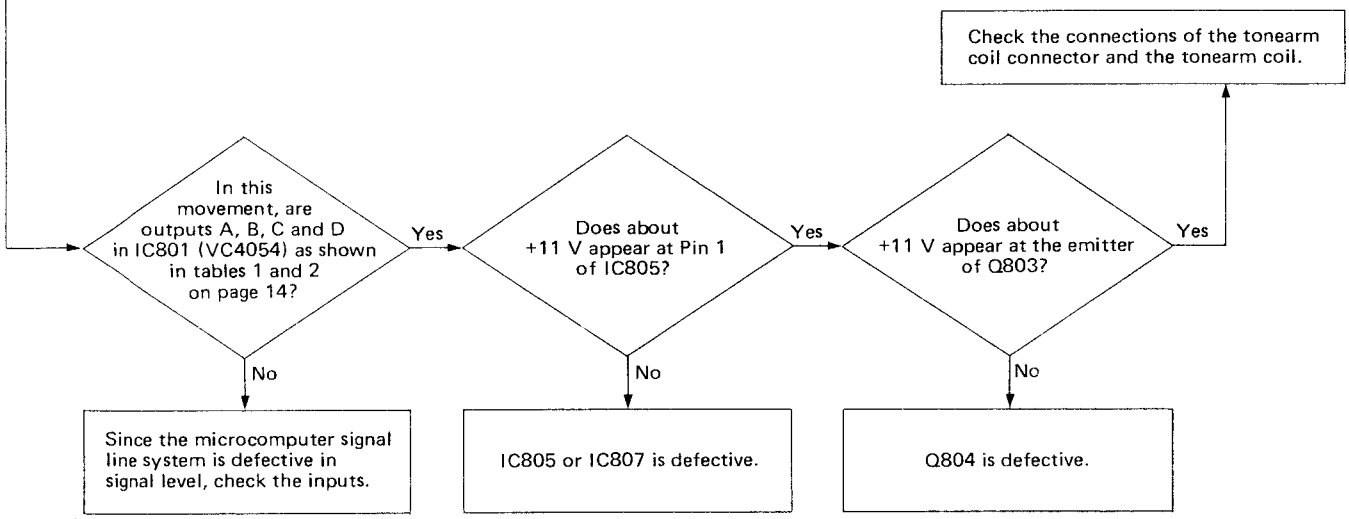
9-(5) Tonearm operation is abnormal



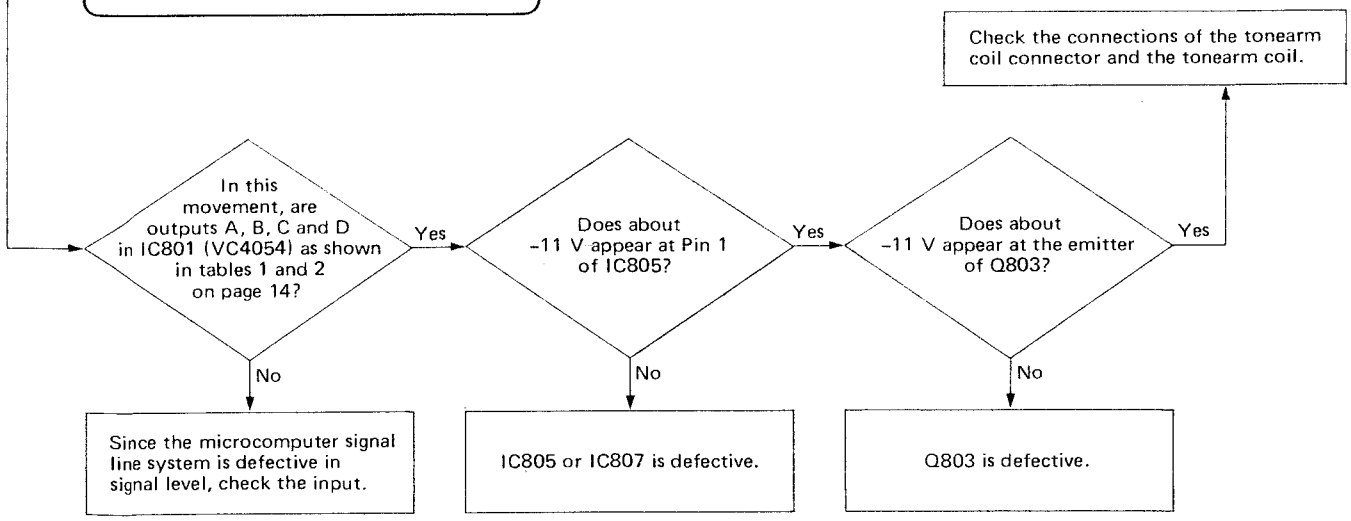
The tonearm does not move to the right (>).

Before checking this, unplug the power cord and remove the socket ass'y (JI) from GND, then check each coil winding.

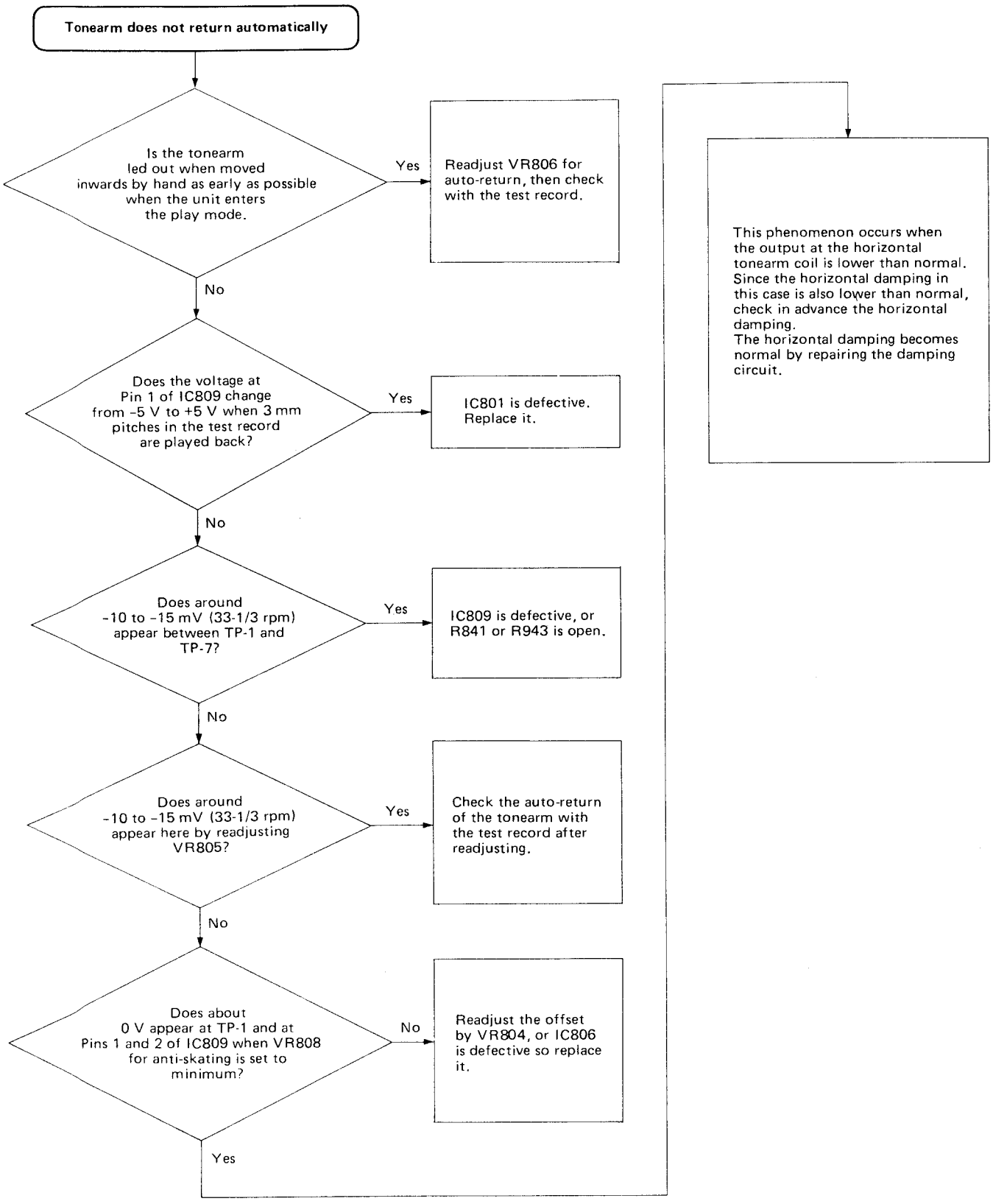
Coil	Vertical driving coil	Vertical detection coil	Horizontal driving coil	Horizontal detection coil
Resistance value	37±2 Ω	150±8 Ω	71.5±4 Ω	580±30 Ω

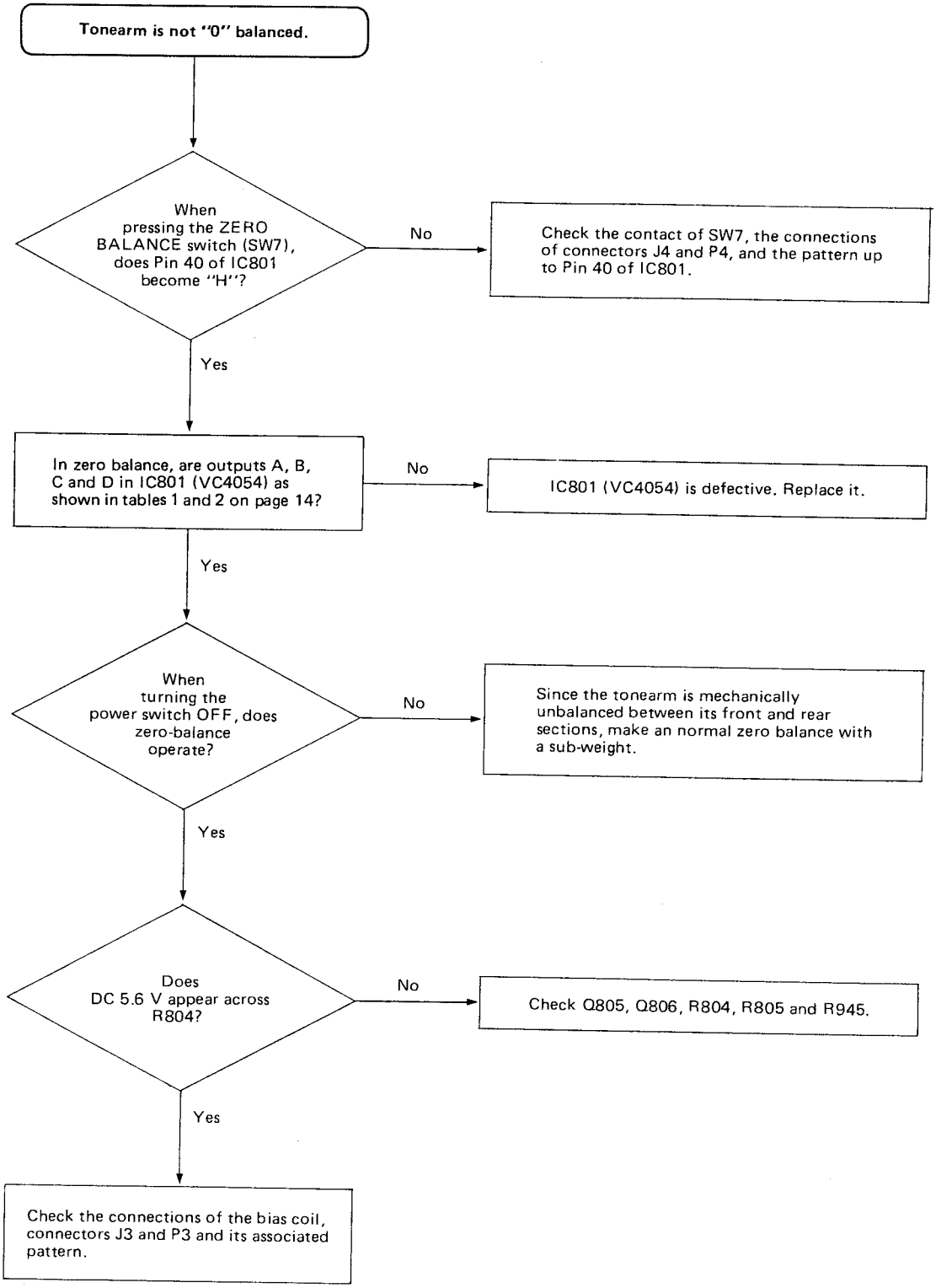


The tonearm does not move to the left (<).




Anti-skating is ineffective.
With the tracking force set to "0" upon play, does the tonearm move to the right by turning VR808 for anti-skating?
Yes
The action of tonearm is normal.
No
Does 25 to 40 mV appear at Pins 6 and 7 of IC805 when VR808 for anti-skating is set to maximum?
No
IC807 is defective, or R831 (220 kΩ) is disconnected.
Yes
Does 0.75 to 1.2 V appear at Pin 6 of IC804?
No
IC807 is defective, or the adjusted VR804 is out of position or the wiring is disconnected.
Yes
Is the emitter voltage of Q803 positive in respect to GND?
Yes
The connector or pattern for the arm or board, or the arm coil is disconnected.
No
Q803 is open or Q804 is short-circuited. Replace it.
Cueing-up does not operate.
When pressing the UP/DOWN switch (SW3), does Pin 36 of IC801 become "H"?
No
SW3 is defective, or the board pattern up to IC808 is defective.
Yes
Does Pin 9 of IC801 also become "H"?
No
IC801 is defective. Replace it.
Yes
When pressing SW3, does -11 V appear at the emitter of Q801?
Yes
Since current flows in the tonearm, check mechanical parts and the places into which foreign matter can enter.
No
IC804, Q801 and Q802 are defective. Replace them.


Tonearm does not return automatically
Is the tonearm led out when moved inwards by hand as early as possible when the unit enters the play mode.
Yes
Readjust VR806 for auto-return, then check with the test record.
No
Does the voltage at Pin 1 of IC809 change from -5 V to +5 V when 3 mm pitches in the test record are played back?
Yes
IC801 is defective. Replace it.
No
Does around -10 to -15 mV (33-1/3 rpm) appear between TP-1 and TP-7?
Yes
IC809 is defective, or R841 or R943 is open.
No
Does around -10 to -15 mV (33-1/3 rpm) appear here by readjusting VR805?
Yes
Check the auto-return of the tonearm with the test record after readjusting.
No
Does about 0 V appear at TP-1 and at Pins 1 and 2 of IC809 when VR808 for anti-skating is set to minimum?
No
Readjust the offset by VR804, or IC806 is defective so replace it.
Yes
This phenomenon occurs when the output at the horizontal tonearm coil is lower than normal. Since the horizontal damping in this case is also lower than normal, check in advance the horizontal damping.
The horizontal damping becomes normal by repairing the damping circuit.


Tonearm is not "0" balanced.
When pressing the ZERO BALANCE switch (SW7), does Pin 40 of IC801 become "H"?
No
Check the contact of SW7, the connections of connectors J4 and P4, and the pattern up to Pin 40 of IC801.
Yes
In zero balance, are outputs A, B, C and D in IC801 (VC4054) as shown in tables 1 and 2 on page 14?
No
IC801 (VC4054) is defective. Replace it.
Yes
When turning the power switch OFF, does zero-balance operate?
No
Since the tonearm is mechanically unbalanced between its front and rear sections, make an normal zero balance with a sub-weight.
Yes
Does DC 5.6 V appear across R804?
No
Check Q805, Q806, R804, R805 and R945.
Yes
Check the connections of the bias coil, connectors J3 and P3 and its associated pattern.

10. Connection Diagram

10-(1) Generalized unit

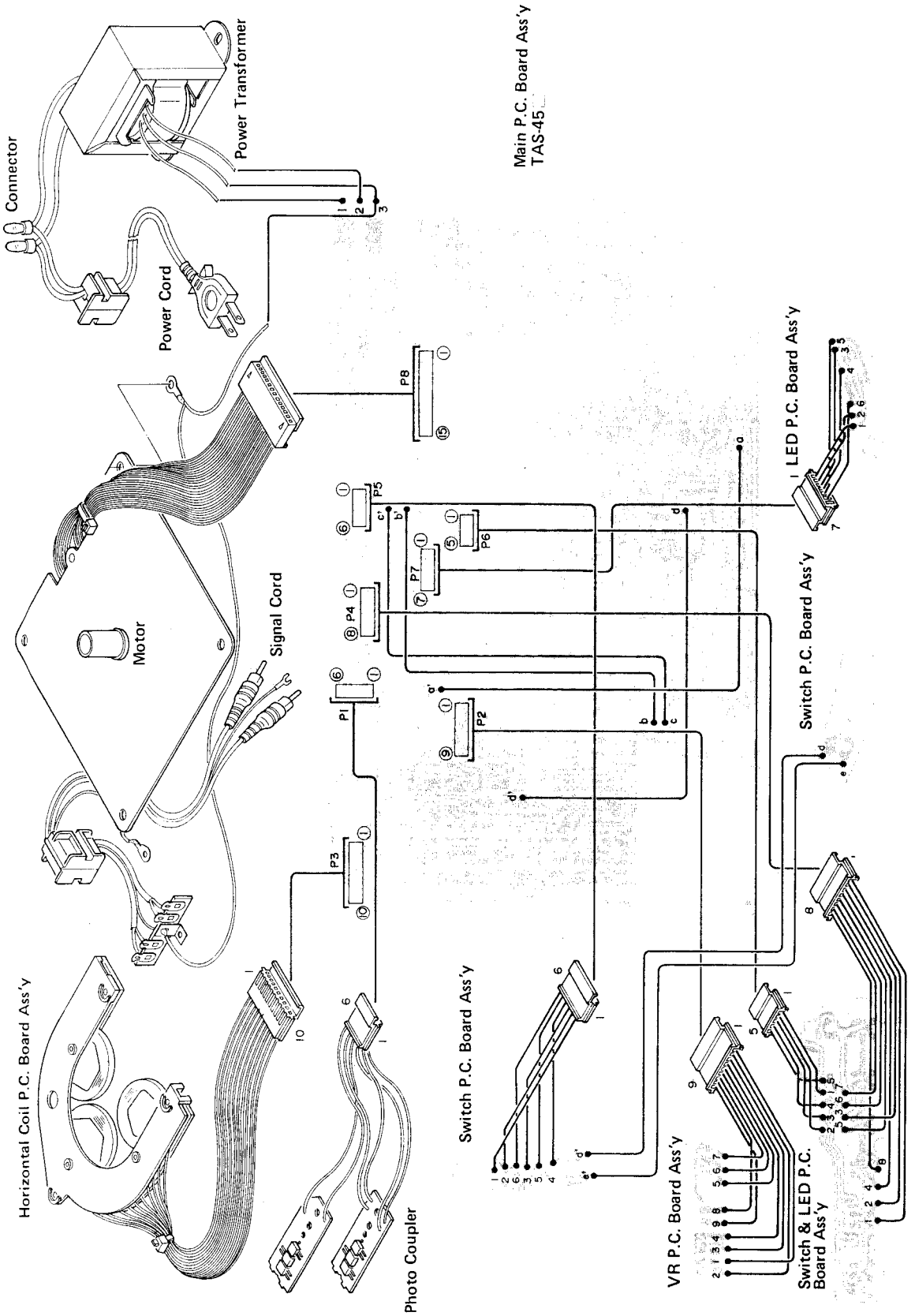


Fig. 23

10-(2) Vertical drive generator unit

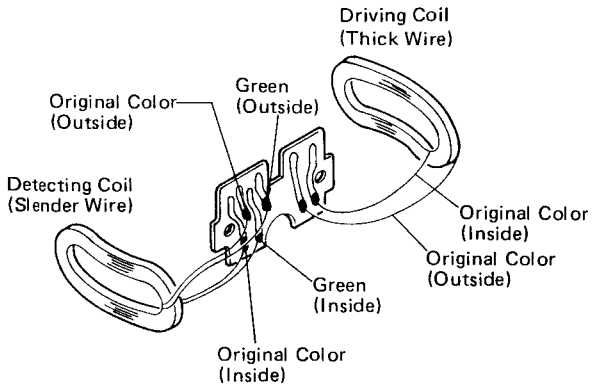


Fig. 24

10-(3) Tonearm unit

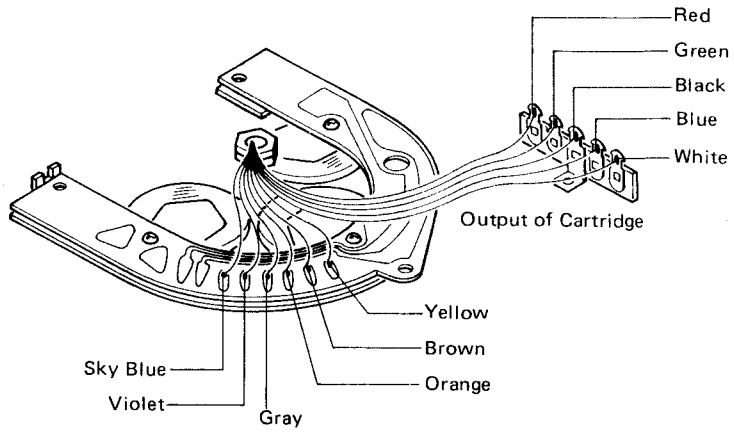


Fig. 25

11. How to Handle the Solderless Connector

In this turntable, a solderless connector is used to connect the power cord with the primary lead wire of the power transformer.
When it is unavoidable to replace this connector for replacement of the power transformer, or the like, positively perform the replacement in accordance with the following procedure to avoid dangers.

- **Connector part number**
  E03830-001
- **Tools**
  Tool for installing solderless connectors.
  Do not use those (small cutting pliers, etc.) other than regular tools.
  Example: VACO No. 1963 (Courtesy Vaco Products Co.)

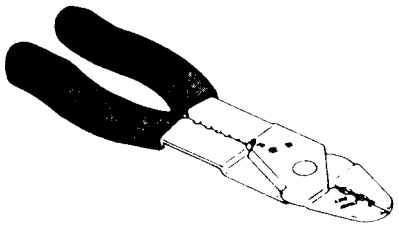


Fig. 26

- **Replacement**

1. Cut both the power cord and the primary lead wire at near the edge of the connector to be replaced.
   Note: Do not re-use the used connector.

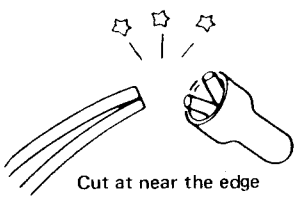


Fig. 27

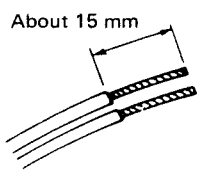


Fig. 28

2. Peel off the coverings so that the respective conductor tops appear by about 15 mm as shown in Fig. 28.
   Note: In the case of stranded wires, test each wire.
3. Adjust the tips of the power cord and the primary lead wire with each other, then securely insert them into the connector as shown in Fig. 29.

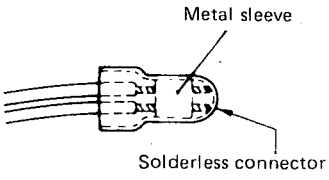


Fig. 29

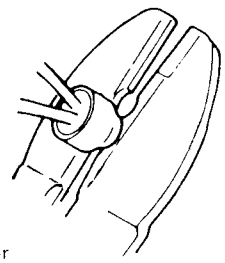


Fig. 30

4. Secure the nearly equal central part of the metal sleeve with the second concave of the tool for solderless securing as shown in Fig. 30.
   Note: Perform a complete securing.
5. After solderless securing, check the following as shown in Fig. 31.
   Note: Protect the connector with isolation tape or vinyl tube for safety. Furthermore, clamp it for out of touch with metal part.

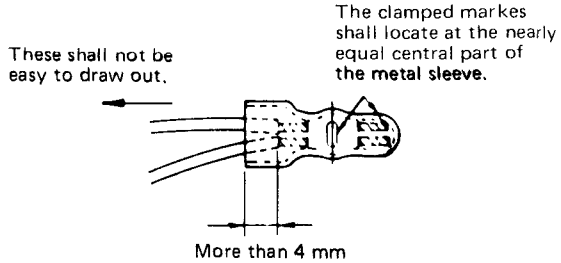


Fig. 31

12. Exploded View and Part Numbers

12-(1) Cabinet Ass'y

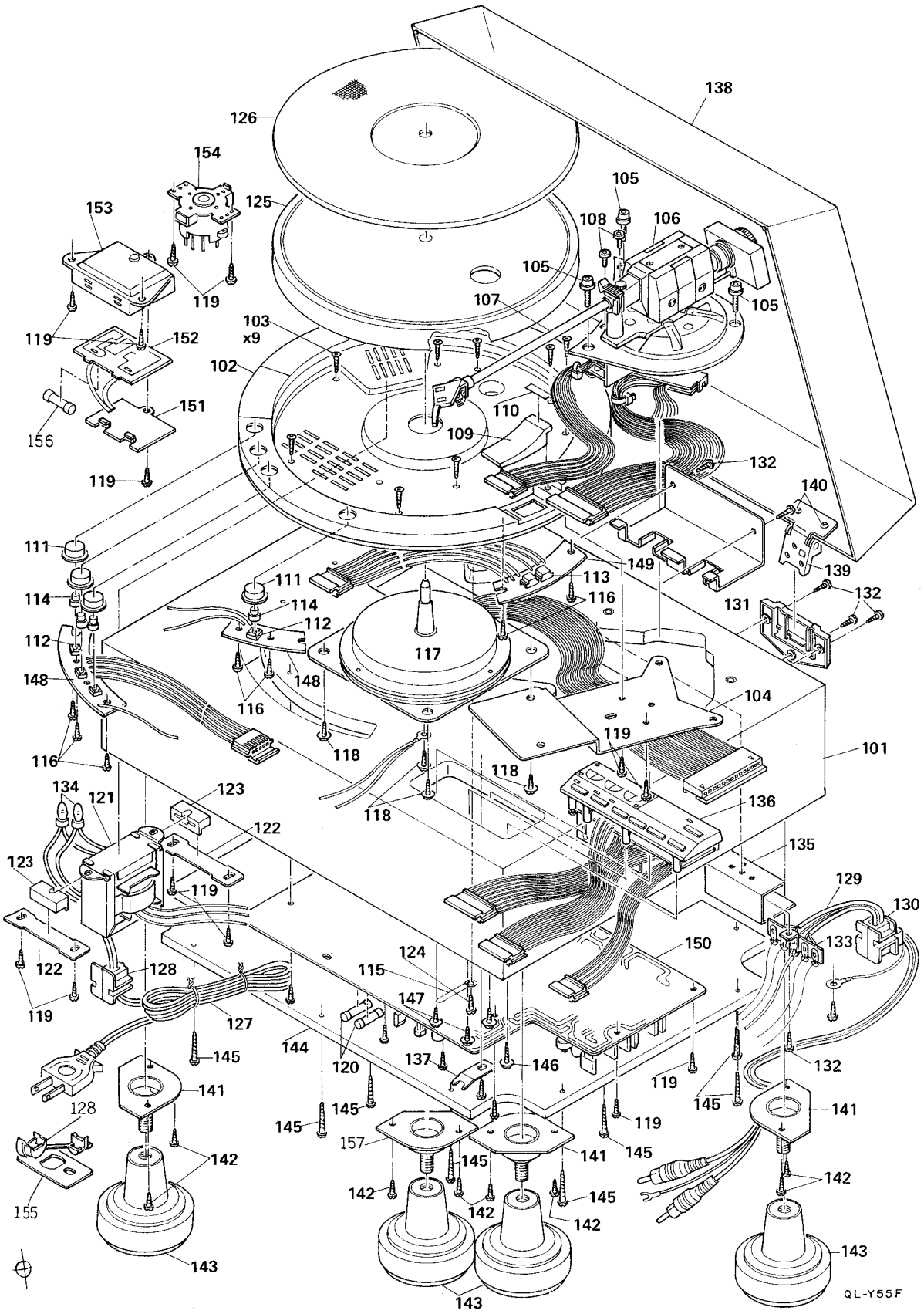


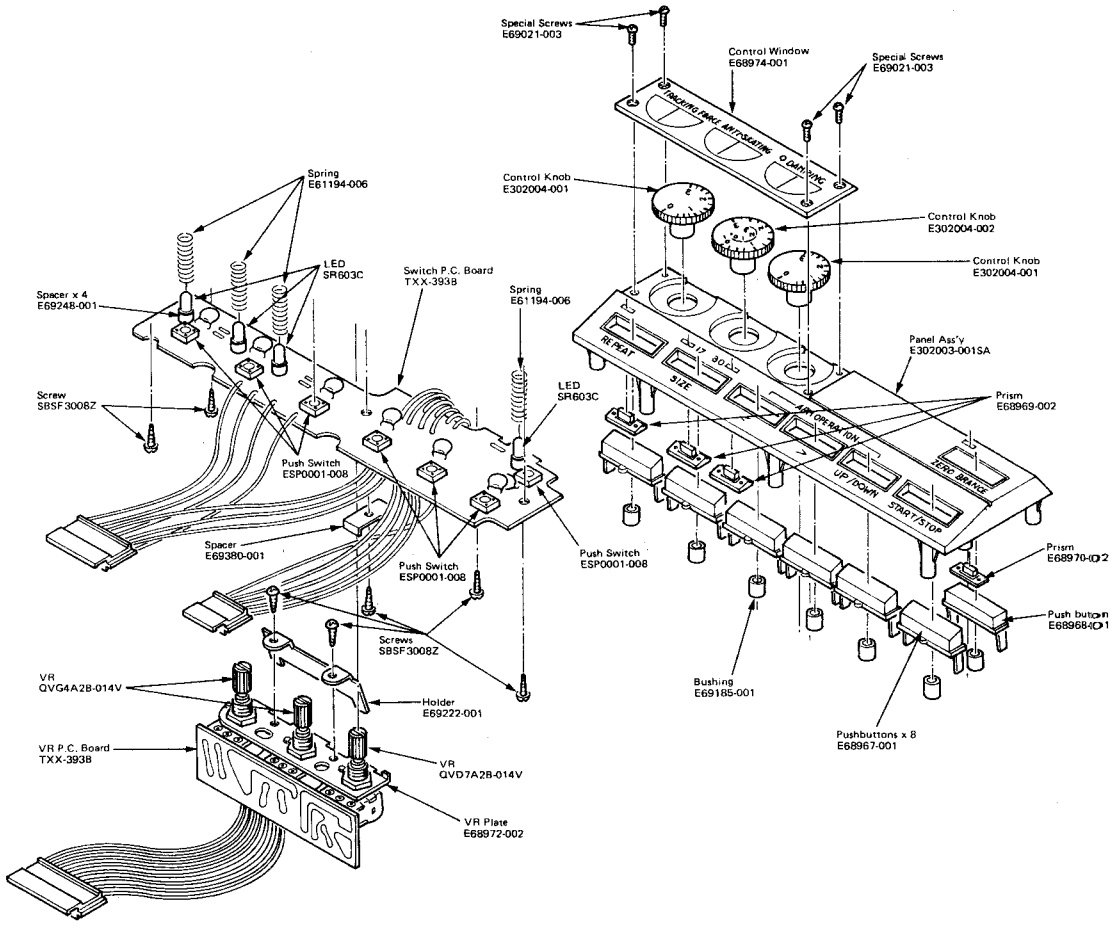
Fig. 32

Item No.	Part Number	Description	Q'ty
101	EZC-QLY55FE	Cabinet Ass'y	1
102	E10683-003	Base	1
103	SHSA3014N	Screw	7
104	E302036-001	C. Plate	1
105	E69183-001	Special Screw	3
106	See page 32	Tonearm Ass'y	1
107	See page 32	Arm Pipe Ass'y	1
108	E68928-001	Special Screw	2
109	E301897-001	Prism	1
110	E68882-001	Mark	1
111	E68852-001	Button	4
112	ESP0001-007	Push Switch	4
113	SLF-5022	L.E.D.	2
114	E69186-001	Bushing	4
115	E50670-005	Wire Clamp	3
116	SBSF3006Z	Tapping Screw	5
117	M938Q	Motor Ass'y	1
118	GBSF4012Z	Tapping Screw	4
119	SBSF3008Z	Tapping Screw	13
120	See page 32	Fuse (Secondary) ⚠	2
121	See page 32	Power Transformer ⚠	1
122	See page 32	Transformer Plate	2
123	E61824-002	Cushion	2
124	SBSA3012Z	Tapping Screw	3
125	E24003-001	Platter	1
126	E23326-003	Platter Covering	1
127	See page 32	Power Cord ⚠	1
128	See page 32	Cord Stopper ⚠	1
129	E03724-003G	Signal Cord	1
130	A27355	Cord Clamp	1

Item No.	Part Number	Description	Q'ty
131	E68884-005	C.S. Plate	1
132	SBSA3010M	Screw	9
133	QML0002-051	Lug Strip Ass'y	1
134	See page 32	Connector ⚠	2
135	E302243-001	Shield Cover	1
136	E302003-003SA	Panel Ass'y	1
137	E69379-001	Holder	1
138	E301966-002SA	Dust Cover Ass'y	1
	E65280-001	Cushion	2
139	E61992-003	Hinge Ass'y	2
140	SDSP3008M	Screw	4
141	See page 32	Insulator (1)	3
142	SBSA3010M	Screw	8
143	E68886-001	Foot Case Ass'y	4
144	See page 32	Bottom Board	1
145	SBSA3020Z	Tapping Screw	9
146	E65923-002	Tapping Screw	1
147	E65923-003	Tapping Screw	3
148	E301982-002	Switch P.C. Board	1
149	E301983-002	L.E.D. P.C. Board	1
150	See page 32	Main P.C. Board Ass'y	1
151	See page 32	Circuit Board Cover	1
152	See page 32	Circuit Board (for TPS-332)	1
153	See page 32	Circuit Board Case	1
154	See page 32	Voltage Selector ⚠	1
155	See page 32	Cord Stopper Plate	1
156	See page 32	Fuse (Primary) ⚠	1
157	See page 32	Insulator (2)	1

⚠ : Safety Parts

12-(2) Control Panel Ass'y



12-(3) Tonearm Ass'y (ARM-542 or MP-332S: See page 32)

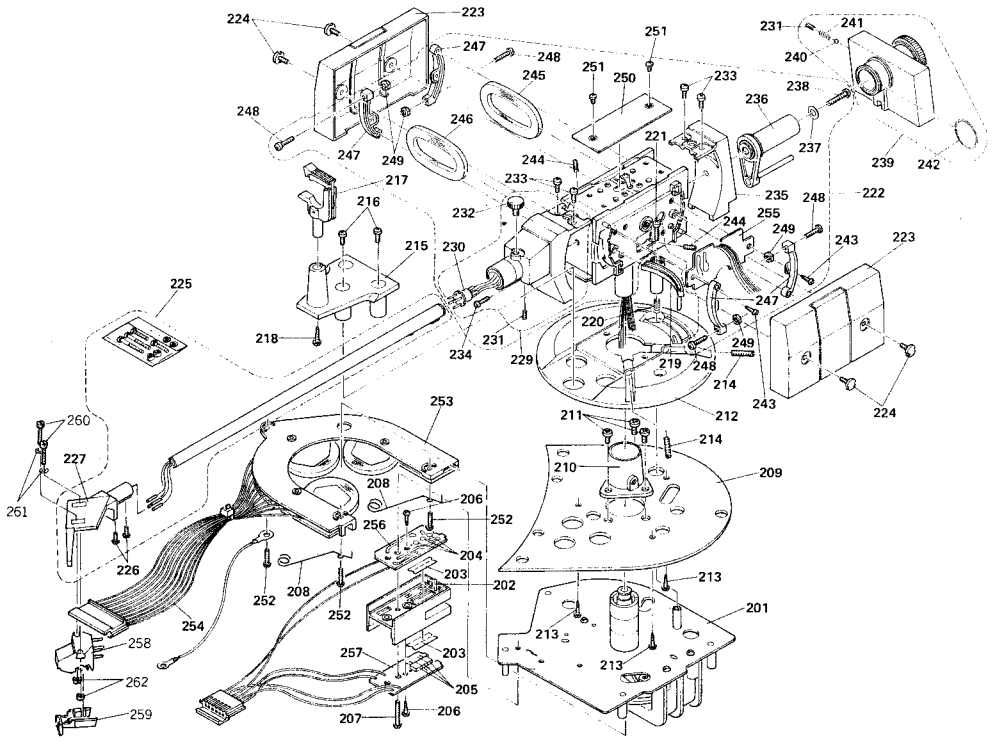


Fig. 34

Item No.	Part Number	Description	Q'ty
201	E302226-001	Base Ass'y	1
202	E300672-001	Lamp House	1
203	E66931-001	Mask	2
204	PN150LF	Photo Transistor	3
205	LN25RCPCLF	L.E.D.	3
206	E68472-001	Tapping Screw	2
207	SPSP3016Z	Screw	1
208	E68744-001	Wire Holder	2
209	E302023-001	Pick-Up Plate	1
210	E69007-001	Adjust Base	1
211	SPST4006Z	Tapping Screw	3
212	E24059-001	Pick-Up Base	1
213	SBSF3010Z	Tapping Screw	3
214	YRS4016M	Set Screw	2
215	E302024-002	Rest Stand	1
216	SPSP3005Z	Screw	2
217	E65824-005	Rest Ass'y	1
218	E65921-003	Tapping Screw	1
219	E302038-002	Stopper	1
220	E49649-001	Spring	1
221	SPSP3010N	Screw	1
222	E24164-001	Vertical Drive Generator	1
223	E24061-001	Cover	2
224	E66933-001	Screw	4
225	E24065-001	Arm Pipe Ass'y	1
226	SBSB2005N	Screw	2
227	E302041-001	Head Case Ass'y	1
228	Blank	–	–
229	E302015-001	Pipe Holder Ass'y	1
230	E69207-002	Pin Connector Ass'y	1

Item No.	Part Number	Description	Q'ty
231	TRS2603	Set Screw	1
232	E68762-003	Screw	1
233	SPSK2605Z	Screw	4
234	SPSP2606Z	Screw	1
235	E24054-001	Weight Shaft Holder	1
236	E68996-001	Weight Shaft Ass'y	1
237	E67605-001	Washer	1
238	SPSP2614Z	Screw	1
239	E302016-001	Main Weight Ass'y	1
240	D=2	Steel Ball	1
241	E60463-002	Spring	1
242	E68992-001	Clip	1
243	SPBP2606N	Screw	2
244	YRS3004M	Set Screw	2
245	E68994-001	Vertical Coil (A)	1
246	E69010-001	Vertical Coil (B)	1
247	E302013-001	Coil Clamp	4
248	SPBP2610N	Screw	4
249	NTB2600	Nut	4
250	E68995-001	Plate	1
251	SPSK2003M	Screw	2
252	SPSP3008Z	Screw	3
253	E302235-001	Horizontal P.C. Board	1
254	EWS01A-008	Socket Wire Ass'y	1
255	E68997-001	Vertical P.C. Board	1
256	E66944-001	Signal P.C. Board (A)	1
257	E66945-001	Signal P.C. Board (B)	1
258	MC-200EZ	Cartridge Body Ass'y	1
259	DT-200EL	Stylus Ass'y	1
260	E69662-002	Screw	2
261	E68310-004	Washer	2
262	E69663-001	Nut	2

Note: Parts of item Nos. 243, 248 and 249 are of brass so that the tonearm is free from the effect of magnetism. Do not substitute any other material for them.

13. Printed Circuit Board Ass'y and Parts List

13-(1) TAS-45□ Main P.C. Board Ass'y

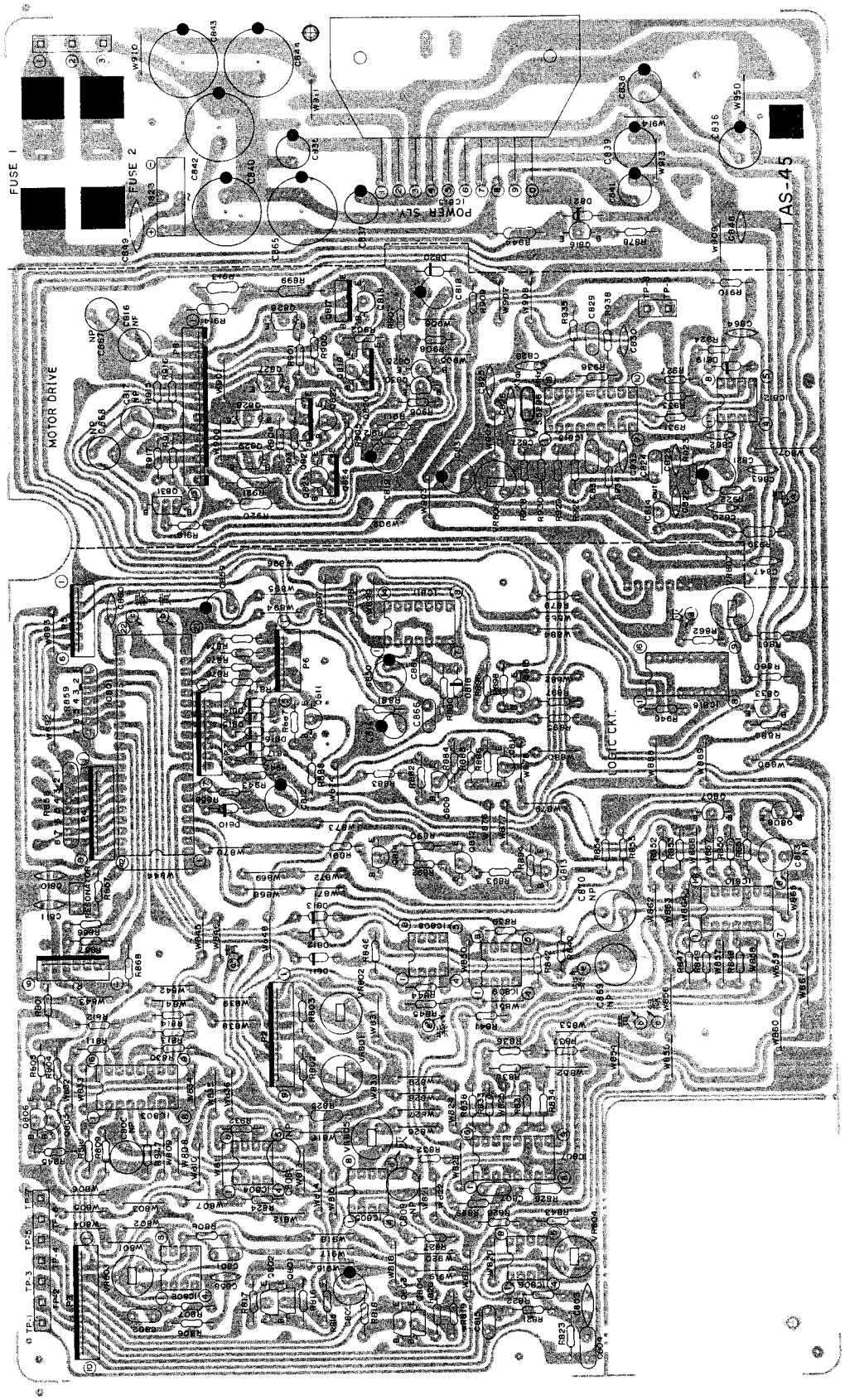


Fig. 35

Transistors

Item No.	Part Number	Rating	Description	
				Maker
Q801	2SD571(L,K)		Silicon	NEC
Q802	2SB605(L,K)		"	"
Q803	2SD571(L,K)		"	"
Q804	2SB605(K,L)		"	"
Q805	2SC945A(P,Q)		"	"
Q806	2SC945A(P,Q)		"	"
Q807	2SA733A(P,Q)		"	"
Q808	2SA733A(P,Q)		"	"
Q809	2SA733A(P,Q)		"	"
Q810	2SC945A(P,Q)		"	"
Q811	2SA733A(P,Q)		"	"
Q812	2SA733A(P,Q)		"	"
Q813	2SC945A(P,Q)		"	"
Q814	2SC945A(P,Q)		"	"
Q815	2SC945A(P,Q)		"	"
Q816	2SA733A(P,Q)		"	"
Q817	2SD794(P,Q)		"	"
Q818	2SA733A(P,Q)		"	"
Q819	2SA733A(P,Q)		"	"
Q820	2SD794(P,Q)		"	"
Q821	2SD794(P,Q)		"	"
Q822	2SA733A(P,Q)		"	"
Q823	2SA733A(P,Q)		"	"
Q824	2SD794(P,Q)		"	"
Q825	2SC945A(P,Q)		"	"
Q826	2SB605(K,L)		"	"
Q827	2SB605(K,L)		"	"
Q828	2SB605(K,L)		"	"
Q829	2SB605(K,L)		"	"
Q830	2SA733A(P,K)		"	"
Q831	2SC2259(F,G)		"	Misubishi
Q833	2SD571(L,K)		"	NEC

Integrated Circuits

Item No.	Part Number	Rating	Description	
				Maker
IC801	VC4054		I.C.	Okidenki
IC802	HA17741PS		"	Hitachi
IC803	TC4052BP		"	Toshiba
IC804	AN6552		"	Matsushita
IC805	AN6552		"	"
IC806	HA17741PSV		"	Hitachi
IC807	TC4052BP		"	Toshiba
IC808	AN6552		"	Matsushita
IC809	AN6552		"	"
IC810	TC4016BP		"	Toshiba
IC811	TC4013BP		"	"
IC812	NJM4558D-D		"	JRC
IC813	VC4046		"	Okidenki
IC814	NJM78L08A		"	JRC
IC815	STK5416		"	Sanyo
IC816	TC4050BP		"	Toshiba

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D810	1S2076-31		Silicon	Hitachi
D811	1S2076-31		"	"
D812	1S2076-31		"	"
D813	1S2076-31		"	"
D814	1S2076-31		"	"
D815	1S2076-31		"	"
D816	1S2076-31		"	"
D817	1S2076-31		"	"
D818	1S2076-31		"	"
D819	1S2076-31		"	"
D820	VD1220		"	NEC
D821	RD5.6EB3		Zener	"
D823	S1RBA20F1		Silicon	Shindengen

Capacitors

Item No.	Part Number	Rating		Description
C801	QFM81HK-104	0.1 μF	50 V	Mylar
C802	QFM81HK-473	0.047 μF	"	"
C803	QCF21HP-223A	0.022 μF	"	Ceramic
C804	QFM81HK-104	0.1 μF	"	Mylar
C805	QET51HR-106H	10 μF	"	Electro
C806	QEZ0046-105	1 μF	"	Non-Pole
C807	QFM81HK-223	0.022 μF	"	Mylar
C808	QEZ0046-105	1 μF	"	Non-Pole
C809	QEZ0046-224	0.22 μF	"	"
C810	QCT26CH-221A	220 pF	"	Ceramic
C811	QCT26CH-221A	"	"	"
C812	QET51ER-106H	10 μF	25 V	Electro
C813	ECEA1EN330S	33 μF	"	Non-Pole
C814	QFM81HK-104	0.1 μF	50 V	Mylar
C815	QFM81HK-473	0.047 μF	"	"
C816	ECEA1EN330S	33 μF	25 V	Non-Pole
C817	ECEA1EN330S	"	"	"
C818	QET51HR-475H	4.7 μF	50 V	Electro
C819	QET51HR-474H	0.47 μF	"	"
C820	QCF21HP-223A	0.022 μF	"	Ceramic
C821	QET51HR-106H	10 μF	"	Electro
C822	QCT26UJ-330A	33 pF	"	Ceramic
C823	QCF21HP-102A	1000 pF	"	"
C824	QFM81HK-104	0.1 μF	"	Mylar
C825	QCF21HP-223A	0.022 μF	"	Ceramic
C826	QCT26UJ-330A	33 pF	"	"
C827	QCT26UJ-330A	"	"	"
C828	QCF21HP-223A	0.022 μF	"	"
C829	QFM81HK-473	0.047 μF	"	Mylar
C830	QCF21HP-103A	0.01 μF	"	Ceramic
C831	QET51CR-476H	47 μF	16 V	Electro
C832	QFM81HK-473	0.047 μF	50 V	Mylar
C833	QCF21HP-103A	0.01 μF	"	Ceramic
C835	QET51HR-476H	47 μF	"	Electro
C836	QET51CR-476H	"	16 V	"
C837	QET51CR-476H	"	"	"
C838	QET51CR-476H	"	"	"
C839	QET51CR-476H	"	"	"
C840	QET51VR-108H	1000 μF	35 V	"
C841	QET51HR-476H	47 μF	50 V	"
C842	QET51VR-108H	1000 μF	35 V	"
C843	QET51VR-108H	"	"	"
C844	QET51VR-108H	"	"	"
C847	QCF21HP-103A	0.01 μF	50 V	Ceramic
C848	QCF21HP-103A	0.01 μF	"	"
C849	QCE22HP-103A	0.01 μF	500 V	"
C850	QET51HR-106H	10 μF	50 V	Electro
C858	QCF21HP-223A	0.022 μF	"	Ceramic
C859	QET51AR-476H	0.47 μF	10 V	Electro
C860	QCF21HP-103A	0.01 μF	50 V	Ceramic
C861	QFM81HK-104	0.1 μF	"	Mylar
C862	QCF21HP-103A	0.01 μF	"	Ceramic
C863	QCF21HP-103A	"	"	"
C864	QCF21HP-103A	"	"	"
C865	QET51VR-108H	1000 μF	35 V	Electro
C866	QFM81HK-104	0.1 μF	50 V	Mylar
C867	QFM81HK-104	"	"	"

13. Printed Circuit Board Ass'y and Parts List

13-(1) TAS-45☐ Main P.C. Board Ass'y

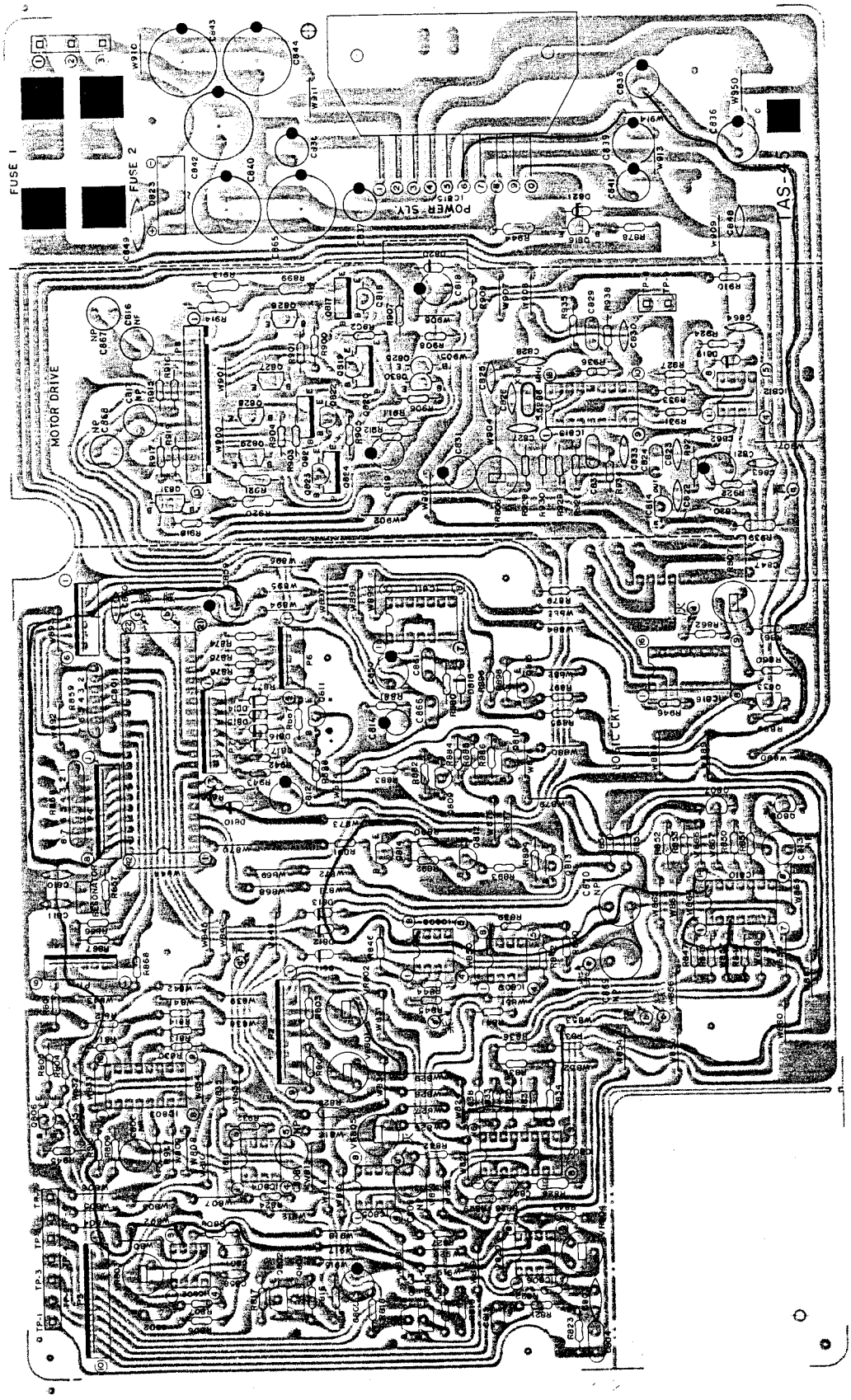


Fig. 35

Antiskating einstellungswerte

Voraussetzung: Offsetspannungen richtig eingestellt (0V)

	IC 803	805	807
Antiskatingskala 1,5	Pkt 12: 0,196	Pkt 1 0,91 3 0,041 5 0,039 7 0,040	Pkt 12 0,037 13 0,037
Antiskatingskala 0 (nachaussen)	Pkt 12: 0,002	Pkt 1 0,635 3 0,008 5 0,006 7 0,008	Pkt 12 0,005 13 0,017
Antiskatingskala 3 (nachinnen)	Pkt 12: 0,366	Pkt 1 1,125 3 0,070 5 0,067 7 0,068	Pkt 12 0,065 13 0,065

Resistors

Item No.	Part Number	Rating		Description
R801	QRD141J-331S	330 Ω	1/4 W	Carbon
R802	QRD141J-243S	24 kΩ	"	"
R803	QRD141J-243S	"	"	"
R804	QRD141J-471S	470 Ω	"	"
R805	QRD141J-222S	2.2 kΩ	"	"
R806	QRD141J-272S	2.7 kΩ	"	"
R807	QRD141J-272S	"	"	"
R808	QRD141J-333S	33 kΩ	"	"
R809	QRD141J-472S	4.7 kΩ	"	"
R810	QRD141J-273S	27 kΩ	"	"
R811	QRD141J-563S	56 kΩ	"	"
R812	QRD141J-433S	43 kΩ	"	"
R813	QRD141J-272S	2.7 kΩ	"	"
R814	QRD141J-392S	3.9 kΩ	"	"
R815	QRZ0052-100	10 Ω	"	Fusible ⚠
R816	QRD141J-102S	1 kΩ	"	Carbon
R817	QRZ0052-100	10 Ω	"	Fusible ⚠
R818	QRZ0052-100	"	"	" ⚠
R819	QRD141J-102S	1 kΩ	"	Carbon
R820	QRZ0052-100	10 Ω	"	Fusible ⚠
R821	QRD141J-242S	2.4 kΩ	"	Carbon
R822	QRD141J-242S	"	"	"
R823	QRD141J-433S	43 kΩ	"	"
R824	QRD141J-472S	4.7 kΩ	"	"
R825	QRD129J-4R7	4.7 Ω	1/2 W	UNF. Carbon ⚠
R826	QRD129J-4R7	"	"	" ⚠
R827	QRD141J-472S	4.7 kΩ	1/4 W	Carbon
R828	QRD141J-472S	"	"	"
R829	QRD141J-133S	13 kΩ	"	"
R830	QRD141J-103S	10 kΩ	"	"
R831	QRD141J-224S	220 kΩ	"	"
R832	QRD141J-103S	10 kΩ	"	"
R833	QRD141J-222S	2.2 kΩ	"	"
R834	QRD141J-223S	22 kΩ	"	"
R835	QRD141J-222S	2.2 kΩ	"	"
R836	QRD141J-103S	10 kΩ	"	"
R837	QRD141J-223S	22 kΩ	"	"
R838	QRD141J-103S	10 kΩ	"	"
R839	QRD141J-223S	22 kΩ	"	"
R840	QRD141J-102S	1 kΩ	"	"
R841	QRD141J-103S	10 kΩ	"	"
R842	QRD141J-103S	"	"	"
R843	QRD141J-103S	"	"	"
R844	QRD141J-103S	"	"	"
R845	QRD141J-103S	"	"	"
R846	QRD141J-821S	820 Ω	"	"
R847	QRD141J-104S	100 kΩ	"	"
R848	QRD141J-223S	22 kΩ	"	"
R849	QRD141J-274S	270 kΩ	"	"
R850	QRD141J-102S	1 kΩ	"	"
R851	QRD141J-223S	22 kΩ	"	"
R852	QRD141J-223S	"	"	"
R853	QRD141J-183S	18 kΩ	"	"
R854	QRD141J-473S	47 kΩ	"	"
R855	QRD141J-473S	"	"	"
R856	QRD141J-223S	22 kΩ	"	"
R857	QRD141J-105S	1 MΩ	"	"
R858	ERGS7XK-103	10 kΩ		Resistor Array
R859	ERGS6XK-103	"		"
R860	QRD141J-103S	10 kΩ	1/4 W	Carbon
R861	QRD141J-103S	"	"	"
R862	QRD141J-225S	2.2 MΩ	"	"
R866	QRD141J-155S	1.5 MΩ	"	"
R867	QRD141J-155S	"	"	"
R868	QRD141J-155S	"	"	"
R874	QRD141J-391S	390 Ω	"	"
R875	QRD141J-391S	"	"	"
R876	QRD141J-391S	"	"	"
R877	QRD141J-391S	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R878	QRD141J-103S	10 kΩ	1/4 W	Carbon
R879	QRD141J-103S	"	"	"
R880	QRD141J-103S	"	"	"
R881	QRD141J-681S	680 Ω	"	"
R882	QRD141J-223S	22 kΩ	"	"
R883	QRD141J-473S	47 kΩ	"	"
R884	QRD141J-223S	22 kΩ	"	"
R885	QRD141J-473S	47 kΩ	"	"
R886	QRD141J-223S	22 kΩ	"	"
R887	QRD141J-473S	47 kΩ	"	"
R888	QRD141J-223S	22 kΩ	"	"
R889	QRD141J-152S	1.5 kΩ	"	"
R890	QRD141J-223S	22 kΩ	"	"
R891	QRD141J-473S	47 kΩ	"	"
R892	QRD141J-473S	"	"	"
R893	QRD141J-473S	"	"	"
R894	QRD141J-223S	22 kΩ	"	"
R895	QRD141J-153S	15 kΩ	"	"
R896	QRD141J-393S	39 kΩ	"	"
R897	QRD141J-223S	22 kΩ	"	"
R898	QRD141J-473S	47 kΩ	"	"
R899	QRX017J-2R7S	2.7 Ω	1 W	Metal Film ⚠
R900	QRD141J-392S	3.9 kΩ	1/4 W	Carbon
R901	QRD141J-392S	"	"	"
R902	QRD141J-680S	68 Ω	"	"
R903	QRD141J-392S	3.9 kΩ	"	"
R904	QRD141J-392S	"	"	"
R905	QRD141J-680S	68 Ω	"	"
R906	QRD141J-122S	1.2 kΩ	"	"
R907	QRD141J-391S	390 Ω	"	"
R908	QRD141J-123S	12 kΩ	"	"
R909	QRD141J-222S	2.2 kΩ	"	"
R910	QRD141J-223S	22 kΩ	"	"
R911	QRD149J-101S	100 Ω	"	UNF. Carbon ⚠
R912	QRD141J-332S	3.3 kΩ	"	Carbon
R913	QRD129J-561	560 Ω	"	UNF. Carbon ⚠
R914	QRD129J-561	"	"	" ⚠
R915	QRD141J-472S	4.7 kΩ	"	Carbon
R916	QRD141J-472S	"	"	"
R917	QRD141J-472S	"	"	"
R918	QRD141J-182S	1.8 kΩ	"	"
R919	QRD141J-472S	4.7 kΩ	"	"
R920	QRD129J-561	560 Ω	"	UNF. Carbon ⚠
R921	QRD129J-561	"	"	" ⚠
R922	QRD141J-102S	1 kΩ	"	Carbon
R923	QRD141J-105S	1 MΩ	"	"
R924	QRD141J-334S	330 kΩ	"	"
R926	QRD141J-223S	22 kΩ	"	"
R927	QRD141J-104S	100 kΩ	"	"
R928	QRD141J-103S	10 kΩ	"	"
R929	QRD141J-155S	1.5 MΩ	"	"
R930	QRD141J-333S	33 kΩ	"	"
R931	QRD141J-104S	100 kΩ	"	"
R932	QRD141J-103S	10 kΩ	"	"
R933	QRD141J-104S	100 kΩ	"	"
R934	QRD141J-153S	15 kΩ	"	"
R935	QRD141J-101S	100 Ω	"	"
R936	QRD141J-394S	390 kΩ	"	"
R938	QRD141J-101S	100 Ω	"	"
R939	QRD129J-471	470 Ω	1/2 W	UNF. Carbon ⚠
R940	QRD141J-3R3S	3.3 Ω	1/4 W	Carbon
R941	QRD141J-3R3S	"	"	"
R942	QRD141J-221S	220 Ω	"	"
R943	QRD141J-243S	24 kΩ	"	"
R944	QRD129J-102	1 kΩ	1/2 W	UNF. Carbon ⚠
R945	QRD148J-222S	2.2 kΩ	1/4 W	Carbon
R946	QRD141J-104S	100 kΩ	"	"
R947	QRD148J-393S	39 kΩ	"	"

Variable Resistors

Item No.	Part Number	Rating	Description
VR801	QVP4A0B-104	100 kΩ	Variable
VR802	QVP4A0B-104	"	"
VR803	QVZ3501-103	10 kΩ	"
VR804	QVZ3501-103	"	"
VR805	QVP4A0B-102	1 kΩ	"
VR806	QVZ3501-473	47 kΩ	"
VR807	QVP4A0B-103	10 kΩ	"

Others

Item No.	Part Number	Rating	Description
	E10698-201		Circuit Board (for U.S.A. & Canada)
	E10698-202		Circuit Board (for Other Areas)
	E03737-007		X'tal
	E03732-015A		Plug
	QMV5005-005		5P Plug Ass'y
	QMV5005-006		6P Plug Ass'y
	QMV5005-007		7P Plug Ass'y
	QMV5005-009		9P Plug Ass'y
	QMV5005-010		10P Plug Ass'y
	QMV5005-008		8P Plug Ass'y
	E45524-002		Fuse Clip (for U.S.A. & Canada)
	E48965-002		Fuse Clip (for Other Areas)
	E67764-002		Terminal Ass'y
	E67764-007		"
	E67764-103		Wraping Terminal
	E03737-009		Resonator
	LPSP3012Z		Screw
	SBSB3008Z		Tapping Screw
	E68562-004		Heat Sink

13-(2) TXX-393B VR & Switch P.C. Board Ass'y

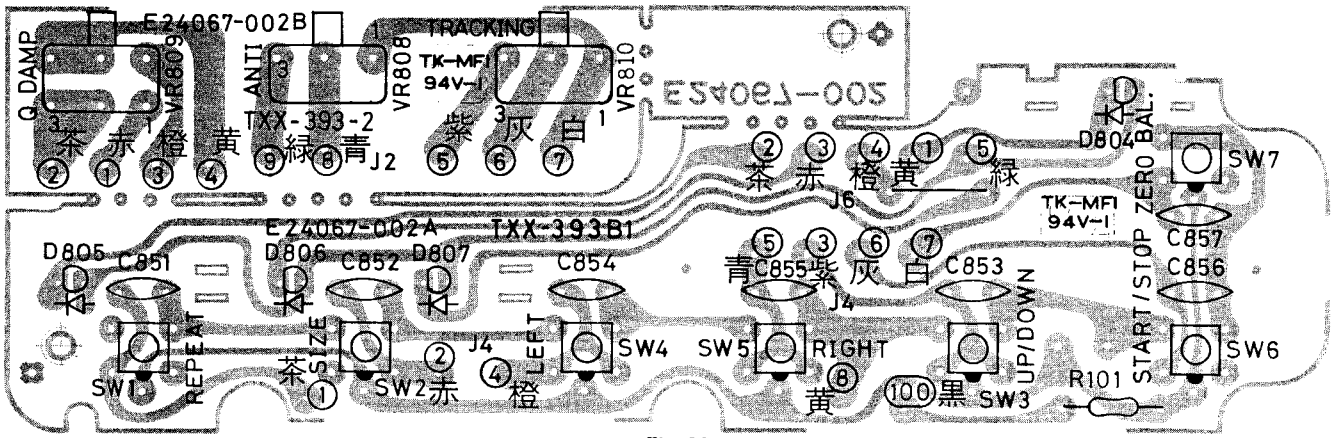


Fig. 36

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D804	SR603C		L.E.D.	NEC
D805	SR603C		"	"
D806	SR603C		"	"
D807	SR603C		"	"

Capacitors

Item No.	Part Number	Rating		Description
C851	QCF21HP-103A	0.01 μF	50 V	Ceramic
C852	QCF21HP-103A	"	"	"
C853	QCF21HP-103A	"	"	"
C854	QCF21HP-103A	"	"	"
C855	QCF21HP-103A	"	"	"
C856	QCF21HP-103A	"	"	"
C857	QCF21HP-103A	"	"	"

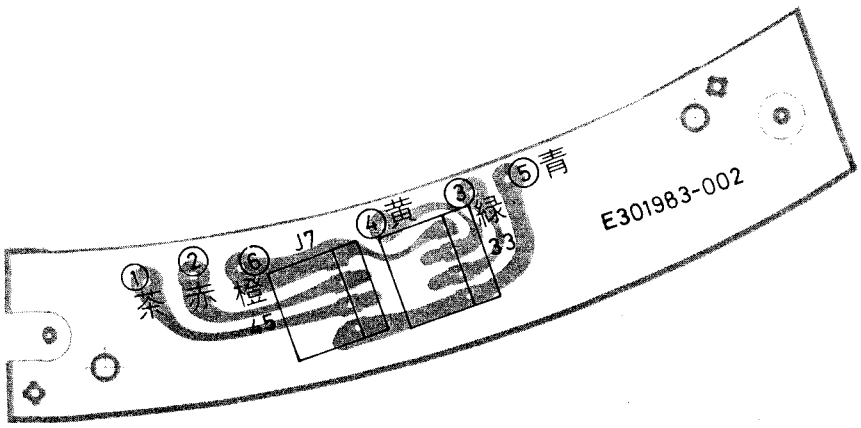
Resistors

Item No.	Part Number	Rating	Description
VR808	QVG4A2B-014V	10 kΩ	Variable
VR809	QVD7A2B-014V	"	"
VR810	QVG4A2B-014V	"	"

Switches

Item No.	Part Number	Rating	Description
SW1	ESP0001-008		Push Switch
SW2	ESP0001-008		"
SW3	ESP0001-008		"
SW4	ESP0001-008		"
SW5	ESP0001-008		"
SW6	ESP0001-008		"
SW7	ESP0001-008		"

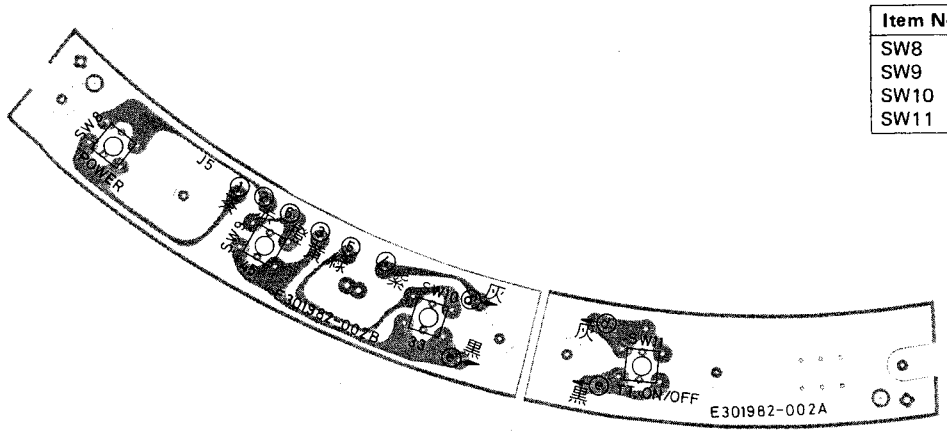
13-(3) LED P.C. Board Ass'y



Item No.	Part Number	Description	
			Maker
D808	SLF5022	L.E.D.	Sanyo
D809	SLF5022	"	"

Fig. 37

13-(4) Switch P.C. Board Ass'y



Item No.	Part Number	Description
SW8	ESP0001-007	Push Switch
SW9	ESP0001-007	"
SW10	ESP0001-007	"
SW11	ESP0001-007	"

Fig. 38

14. Power Cord Connections in Different Areas

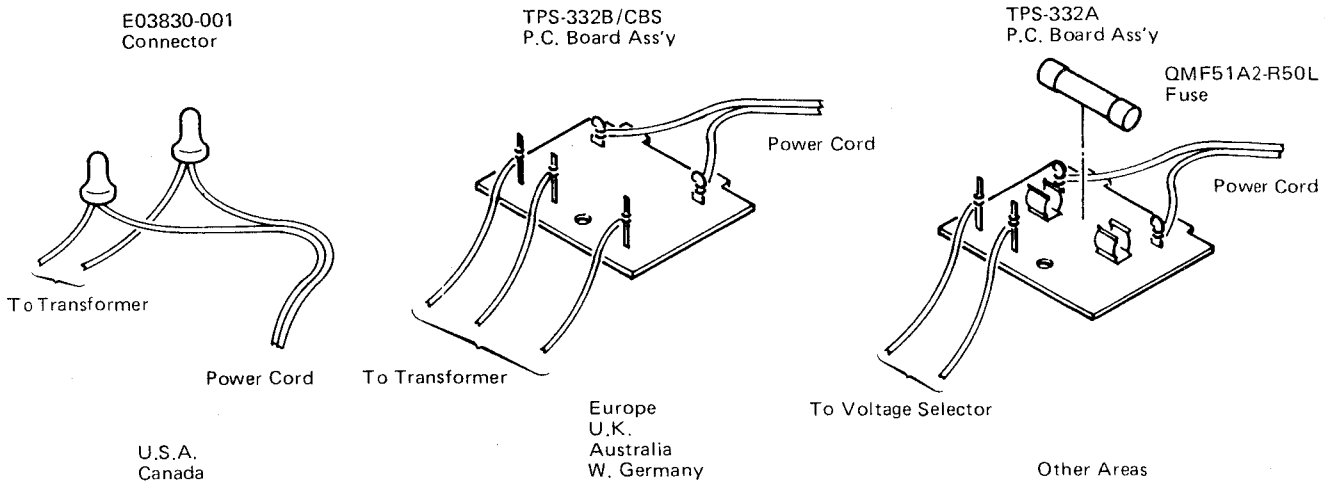


Fig. 39

15. Packing Materials and Part Numbers

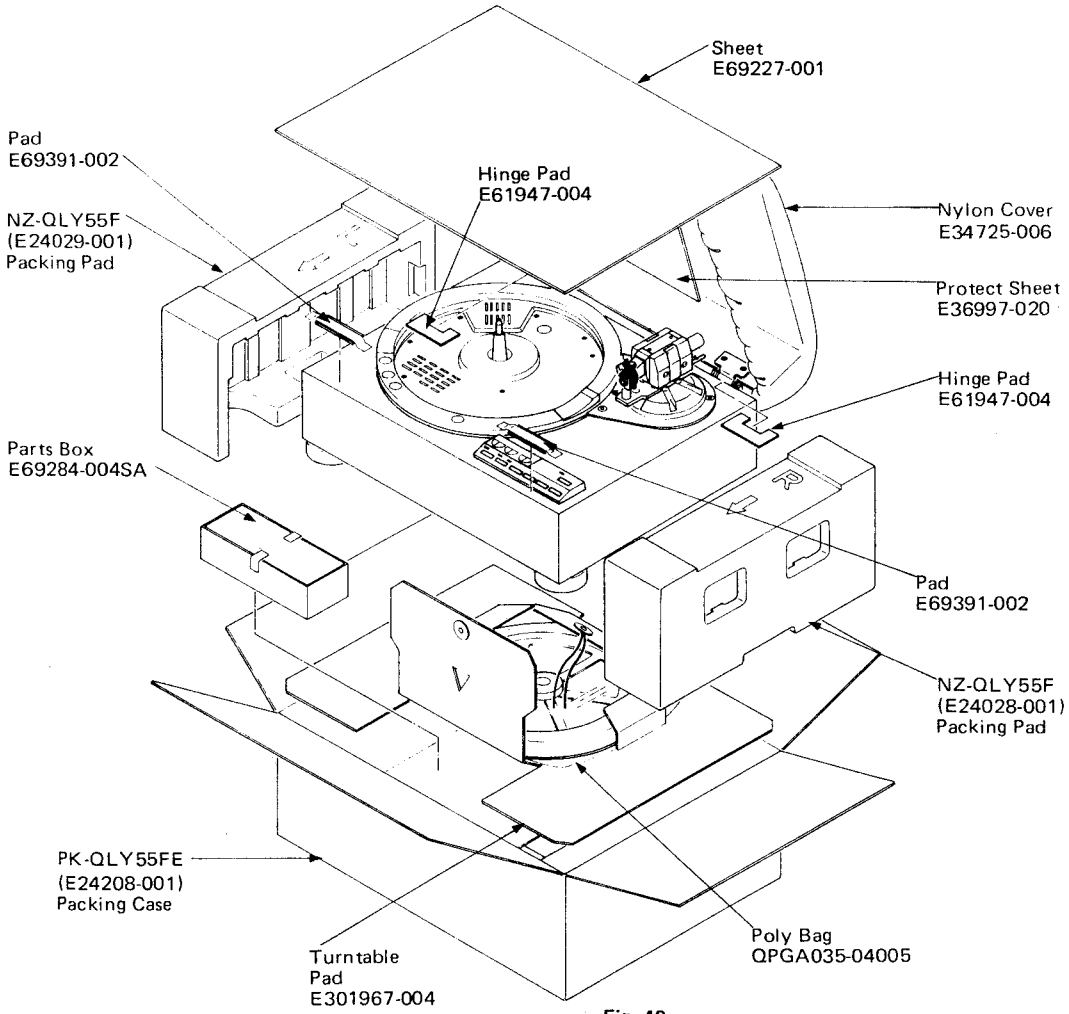


Fig. 40

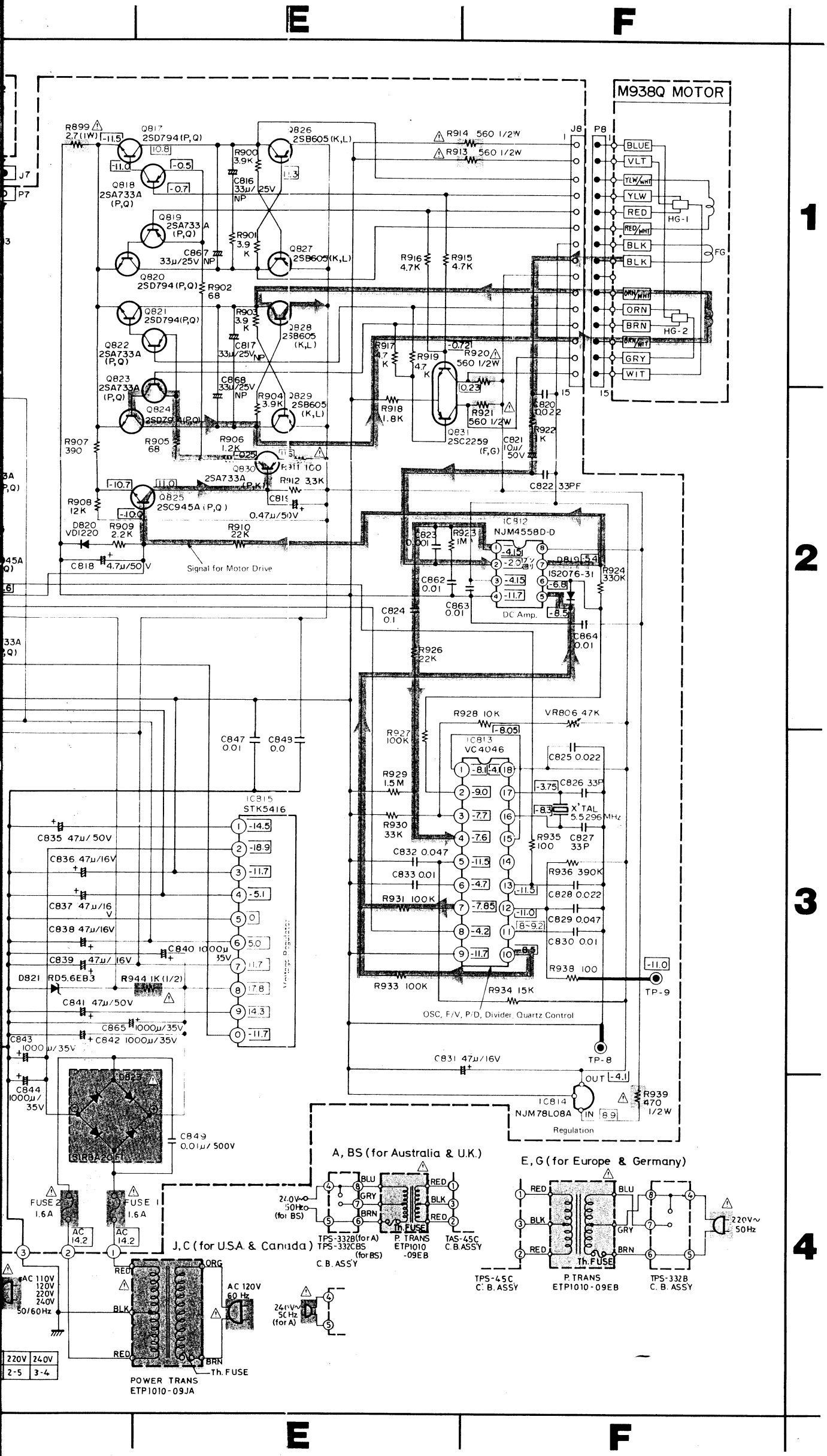
16. Accessories List

Item No.	Description	U.S.A. & (Canada)	Europe & (W. Germany)	U.K.	Australia	U.S. Military Market & (Other Countries)
1	Instruction Book	E30580-1076A (")	E30580-1076A (")	E30580-1076ABS	E30580-1076A	E30580-1076A (E30580-1076A E30580-1077A)
2	Warranty Card	BT20047 (BT20025E)	– (BT-20057)	BT20013C	BT20029C	BT20047 (–)
3	Service Information Card	BT-20046A (–)	– –	– –	–	BT20046A (–)
4	Safety Instruction	BT20044D (–)	– (–)	–	–	– (–)
5	EP Adaptor	E66329-001 (")	E66329-001 (")	E66329-001	E66329-001	E66329-001 (")
6	Siemens Plug	–	–	–	–	– (E04056)
7	Envelope (for Instruction Book	E300196-010 (")	E300196-010 (")	E300196-010	E300196-010	E300196-010 (")
8	Envelope (for Warranty Card	E66416-003 (–)	– (–)	–	–	– (–)
9	Screwdriver	E69127-001 (")	E69127-001 (")	E69127-001 (–)	E69127-001 (–)	E69127-001 (")
10	Arm Pipe Ass'y (S-shaped)	E24041-001 (")	E24041-001 (")	E24041-001 (–)	E24041-001 (–)	E24041-001 (")
11	Sub-weight	E65938-002 (")	E65938-002 (")	E65938-002 (–)	E65938-002 (–)	E65938-002 (")

17. QL-Y55F Schematic Diagram

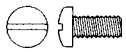
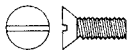
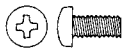
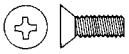
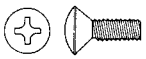
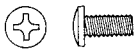
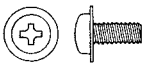
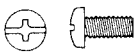
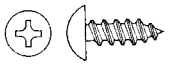
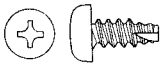
Notes:

1. Voltage values in ☐ are positive.
2. Voltage values in ☐ are negative.
3. —— indicates positive B power supply.
4. —— indicates negative B power supply.
5. ▬ indicates signal path.
6. When replacing the parts in the darkened area (▬) and those marked with ⚠, be sure to use the designated parts to ensure safety.
7. Parts in red indicate transistors or ICs.
8. This is the standard circuit diagram.
   The design and contents are subject to change without notice.


M938Q MOTOR
J8
P8
BLUE
VLT
YLW/WHT
YLW
RED
RED/WHT
BLK
BLK
ORN/WHT
ORN
BRN
BRN/WHT
GRY
WIT
HG-1
HG-2
FG
R914 560 1/2W
R913 560 1/2W
Q817 2SD794(P,Q)
Q826 2SB605(K,L)
Q818 2SA733A (P,Q)
Q819 2SA733A (P,Q)
Q820 2SD794(P,Q)
Q827 2SB605(K,L)
Q821 2SD794(P,Q)
Q822 2SA733A (P,Q)
Q828 2SB605 (K,L)
Q823 2SA733A (P,Q)
Q824 2SD794(P,Q)
Q829 2SB605 (K,L)
Q830 2SA733A (P,K)
Q825 2SC945A (P,Q)
Q831 2SC2259 (F,G)
R899 2.7(1W)
R900 3.9K
R901 3.9 K
R902 68
R903 3.9 K
R904 3.9K
R905 68
R906 1.2K
R907 390
R908 12K
R909 2.2K
R910 22K
R911 100
R912 3.3K
R915 4.7K
R916 4.7K
R917 4.7 K
R918 1.8K
R919 4.7 K
R920 560 1/2W
R921 560 1/2W
R922 K
R923 1M
R924 330K
R926 22K
R927 100K
R928 10K
R929 1.5M
R930 33K
R931 100K
R933 100K
R934 15K
R935 100
R936 390K
R938 100
R939 470 1/2W
C816 33µ/25V NP
C817 33µ/25V NP
C867 33µ/25V NP
C868 33µ/25V NP
C818 4.7µ/50V
C819 0.47µ/50V
C820 0.022
C821 10µ/50V
C822 33PF
C823 0.001
C824 0.1
C825 0.022
C826 33P
C827 33P
C828 0.022
C829 0.047
C830 0.01
C831 47µ/16V
C832 0.047
C833 0.001
C862 0.01
C863 0.01
C864 0.01
VR806 47K
X'TAL 5.5296MHz
IC812 NJM4558D-D
DC Amp.
IS2076-31
IC813 VC4046
OSC, F/V, P/D, Divider, Quartz Control
IC814 NJM78L08A
Regulation
TP-8
TP-9
IC815 STK5416
Voltage Regulator
C835 47µ/50V
C836 47µ/16V
C837 47µ/16V
C838 47µ/16V
C839 47µ/16V
C840 1000µ 35V
C841 47µ/50V
C842 1000µ/35V
C843 1000µ/35V
C844 1000µ/35V
C845 0.01µ/500V
C847 0.01
C848 0.0
D820 VD1220
D821 RD5.6EB3
R944 1K(1/2)
S1RB20F
Signal for Motor Drive
FUSE 2 1.6A
FUSE 1 1.6A
AC 14.2
AC 110V 120V 220V 240V 50/60Hz
220V 240V
2-5 3-4
POWER TRANS ETP1010-09JA
Th. FUSE
AC 120V 60 Hz
24.0V~ 50Hz (for BS)
24.0V~ 50Hz (for A)
A, BS (for Australia & U.K.)
J, C (for U.S.A. & Canada)
E, G (for Europe & Germany)
TPS-332B(for A) TPS-332CBS (for BS) C.B.ASSY
P.TRANS ETP1010-09EB
TAS-45C C.B.ASSY
TPS-45C C.B.ASSY
TPS-332B C.B.ASSY
220V~ 50Hz

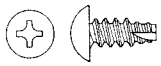
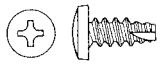
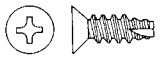
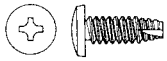
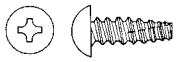
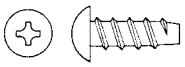
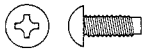
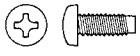
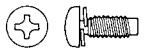
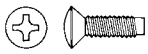
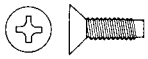
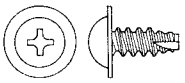
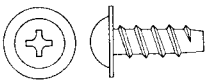
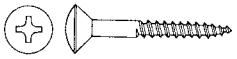
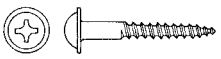
QL-1
No.1

Types of standard screw (1/2)

Type			Type code	View	Abbreviation
Machine screws	Slotted head	Pan head machine screw	SP *		Screw
		Flat head machine screw	SS *		
	Cross recessed head	Pan head machine screw	SP * P		
		Flat head machine screw	SS * P		
		Oval countersunk head machine screw	SH * P		
		Binding head machine screw	SD * P		
		Brazier head machine screw	SB * P		
	For precision equipment	Type 1 pan head machine screw	SP * K		Mini Screw
	Washer head	Pan head machine screw	SW * P		Washer Screw
	Slotted head	Pan head machine screw	SP * X		PM Screw
Cross recessed head with washer	Pan head machine screw	With plain washer	NPSP		Ass'y Screw
		With spring washer	LPSP		
		With plain spring washer	DPSP		
Tapping screws	Cross recessed head	Type 1 oval countersunk head tapping screw	SH * A		Tap. Screw
		Type 1 binding head tapping screw	SD * A		
		Type 1 brazier head tapping screw	SB * A		
		Type 2 pan head tapping screw	SP * B		

Remark: In the type code, replace * with a material code.

Types of standard screw (2/2)

Type			Type code	View	Abbreviation
Tapping screws	Cross recessed head	Type 2 brazier head tapping screw	SB * B		Tap. Screw
		Type 2 binding head tapping screw	SD * B		
		Type 2 flat head tapping screw	SS * B		
		Type 3 binding head tapping screw	SD * C		
Special tapping screws	Evertight	Type 2 brazier head tapping screw	SB * E		TH. Tap. Screw
	P-tight	Brazier head tapping screw	SB * F		
	Taptight	Brazier head tapping screw	SB * T		
		Pan head tapping screw	SP * T		
		Pan head with spring washer tapping screw	LP * T		
		Oval countersunk head tapping screw	SH * T		
		Flat head tapping screw	SS *T		
	Washer head	Type 2 braizer head tapping screw	GB * B		W. Tap. Screw
		P-tight brazier head tapping screw	GB * F		
Wood screw	Cross recessed head	Flat head wood screw	MS * P		Wood Screw
		Round head wood screw	MR * P		
		Oval countersunk head wood screw	MH * P		
	Washer head	Round head wood screw	MW * P		W. Wood Screw

Remark: In the type code, replace * with a material code.

18. Parts List with Specified Numbers for Designated Areas

Item No.	Description	U.S.A. & Canada	Europe & W. Germany	U.K.	Australia	U.S. Military Market & other Countries
1	Power Cord ⚠	QMP1200-200	QMP3900-200	QMP9017-008BS	QMP2560-244	QMP7600-250
2	Cord Stopper ⚠	QHS3876-162	A37897	A37897BS	A37897	A37897
3	Power Transformer ⚠	ETP1010-09JA	ETP1010-09EB	ETP1010-09EBBS	ETP1010-09EB	ETP1010-08GA
4	Transformer Plate	E65751-002	E69575-001	E69575-001	E69575-001	E65751-002
5	Connector ⚠	E03830-001	–	–	–	–
6	Fuse (Primary) ⚠	–	–	–	–	QMF51A2-R50L
7	Fuse (Secondary) ⚠	QMF61U1-1R6 (1.6A – 125V)	QMF51A2-1R6L (T1.6A)	QMF51A2-1R6LBS (T1.6A)	QMF51A2-1R6L (T1.6A)	QMF51A2-1R6L (T1.6A)
8	Voltage Selector ⚠	–	–	–	–	QSR0085-001U
9	Circuit Board Case	–	E302244-001	E302244-001	E302244-001	E302244-001
10	Circuit Board Cover	–	E302246-001	E302246-001	E302246-001	E302246-001
11	Bottom Board	E302070-002	E302070-001	E302070-001	E302070-001	E302070-001
12	Barrier Plate	E69675-001	–	–	–	–
13	Insulator (1)	E301964-004	E301964-002	E301964-002	E301964-002	E301964-002
	Insulator (2)	E301964-003	E301964-001	E301964-001	E301964-001	E301964-001
14	AC Connection P.C. Board Ass'y	–	TPS-332B	TPS-332CBS	TPS-332B	TPS-332A
15	Circuit Board (for TPS-332)	–	E302247-001	E-302247-001BS	E302247-001	E302247-001
16	Tab (for TPS-332)	–	E65508-002	E65508-002	E65508-002	E65508-002
17	Fuse Clip (for TPS-332)	–	–	–	–	EMG7331-001
18	Main P.C. Board Assy	TAS-45B	TAS-45C	TAS-45C	TAS-45C	TAS-45C
19	Circuit Board (TAS-45)	E10698-201	E10698-202	E10698-202	E10698-202	E10698-202
20	Arm Pipe Assy	E24065-001	E24210-001	E24065-001	E24210-001	E24210-001
21	Tonearm Assy (See note below)	ARM-542	MP-332S	ARM-542	MP-332S	MP-332S
22	Cord Stopper Plate	E69574-001	–	–	–	–

⚠: Safety Parts

Note: ARM-542: without cartridge
MP-332S: with cartridge

19. Power Specifications

	Line Voltage & Frequency	Power Consumption
U.S.A. & Canada	AC 120 V∿, 60 Hz	14 watts
Europe & W. Germany	AC 220 V∿, 50 Hz	17 watts
U.K. & Australia	AC 240 V∿, 50 Hz	17 watts
U.S. Military Market & Other Areas	AC 110/120/220/240 V∿ Selectable, 50/60 Hz	17 watts